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OVERSIGHT OF THE NATIONAL HEALTH SERVICE CORPS

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HEARING

BEFORE THE

SUBCOMMITTEE ON HEALTH AND SCIENTIFIC RESEARCH

OF THE

COMMITTEE ON LABOR AND HUMAN RESOURCES UNITED STATES SENATE

NINETY-SIXTH CONGRESS

SECOND SESSION

ON

EXAMINATION ON THE IMPLEMENTATION OF THE NATIONAL HEALTH SERVICE CORPS PROGRAM OF THE HEALTH SERVICES ADMINISTRATION UNDER THE DEPARTMENT OF HEALTH AND HUMAN SERVICES

SEPTEMBER 24, 1980

Printed for the use of the Committee on Labor and Human Resources

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OVERSIGHT OF THE NATIONAL HEALTH SERVICE CORPS

WEDNESDAY, SEPTEMBER 24, 1980

U.S. SENATE,
SUBCOMMITTEE ON HEALTH AND SCIENTIFIC RESEARCH,
COMMITTEE ON LABOR AND HUMAN RESOURCES,
Washington, D.C.

The subcommittee met, pursuant to notice, at 9:38 a.m., in room 4232, Dirksen Senate Office Building, Senator Richard S. Schweiker presiding pro tempore.

Present: Senator Schweiker.

OPENING STATEMENT OF SENATOR SCHWEIKER

Senator SCHWEIKER. The Senate Health Subcommittee will please come to order.

I would like to begin by thanking Senator Kennedy for agreeing to hold these hearings, and to permit me to chair today's session.

Congress created the National Health Service Corps 10 years ago to direct physicians into communities with a demonstrated shortage of health manpower. The objective then was to encourage young physicians through a Federal subsidy, to develop viable practices in shortage areas with the hope they would later remain there in private practice. By all appearances, this original concept of the Corps has, over the past decade changed. Various criteria for designating medically underserved and health manpower shortage areas are so broadly applied that the vast majority of counties in the United States are included, at least in part. Independent private practice is no longer the primary goal. The predominant strategy now is to assign Corps physicians to serve in federally funded health centers. Once assigned to a center, there exists every incentive for a physician to stay under continuing Government subsidy. The result is a burgeoning Government health delivery system—an outcome never intended by Congress.

It is now time to review the Corps' performance, to applaud its successes and to assess its failures. Most importantly, we must determine, in this time of scarce resources, what course should best shape its future. That is the purpose of today's oversight hearing.

In 1960, everyone agreed there was a substantial shortage of physicians in this country. Congress enacted health manpower legislation and induced a greatly expanded supply of new physicians. Today, studies of physician supply for the 1980's, including those conducted by the Department of Health and Human Services, predict a surplus. Since 1960, the ratio of physicians to the population has increased dramatically from 142 physicians per 100,000 population to 200 physicians in 1980. By 1990 it is expected to reach a level of 244 physicians per 100,000 population or 1 physician for every 400 people. Even without other data, simple logic tells me this growth in supply will translate over the next decade into improved physician accessibility for all segments of our population.

I am not alone in this view. A recent editorial in the prestigious Annals of Internal Medicine, suggests that indeed this problem is close to solution. They cite studies which project that by the end of the next decade primary care physicians will be available for 94 percent of the population. Furthermore, survey after survey indicates the American people are generally satisfied with their ability to get health care. One such survey reported that only 2 percent of Americans said they could not obtain health care when they needed it. Obviously pockets of need still exist and access for some of our population is still inadequate. Nevertheless, market forces appear to be at work closing the gap.

The National Health Service Corps also deserves some credit for its role in this encouraging trend and I have been a strong supporter of this effort. Nevertheless, I am compelled to view its future growth with caution.

Despite recent trends, the administration plans a massive expansion of the Corps from 2,000 assignees to a staggering 9,000 in 1990, as you can see in this chart. One has to wonder whether an army of Federal doctors is necessary when the private ranks will be so full.

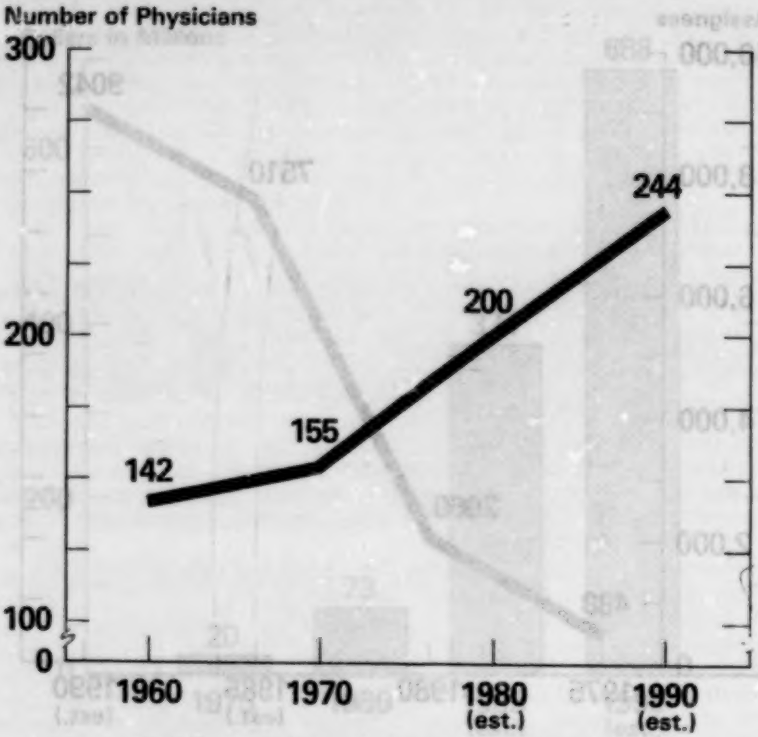
What will this administration strategy cost us? From a modest $20 million in 1975, the Corps service program is projected to cost $374 million in 1985. If no new scholarships were awarded after this academic year, the Government would still be obligated to support existing Corps commitments totaling nearly $1.7 billion during this decade. If allowed to deploy its medical troops at a level of 9,000, the annual cost would reach nearly $700 million by 1990. Health care expenditures are already out of control. With the knowledge that the large number of graduating physicians are substantially improving the distribution of medical care, Congress must ask itself—is an expanded Corps program the best use of the taxpayers' dollars?

I do not advocate an end of the Corps nor diminishment of its current size. However, with an expanded program, I foresee Corps placements unfairly competing with the private health delivery system, and depriving many underserved areas in our Nation from obtaining a physician with a long-term commitment to live and serve in their community.

I hope the comments of today's witnesses will shed further light on this topic and assist us in forging an appropriate role for the Corps in the years ahead.

[The following information was supplied for the record:]

Physicians Per 100,000 Population



1960 = 1 physician per 704 persons
1990 = 1 physician per 409 persons

Source: Health United States, 1979, U.S. Department of Health and Human Services.

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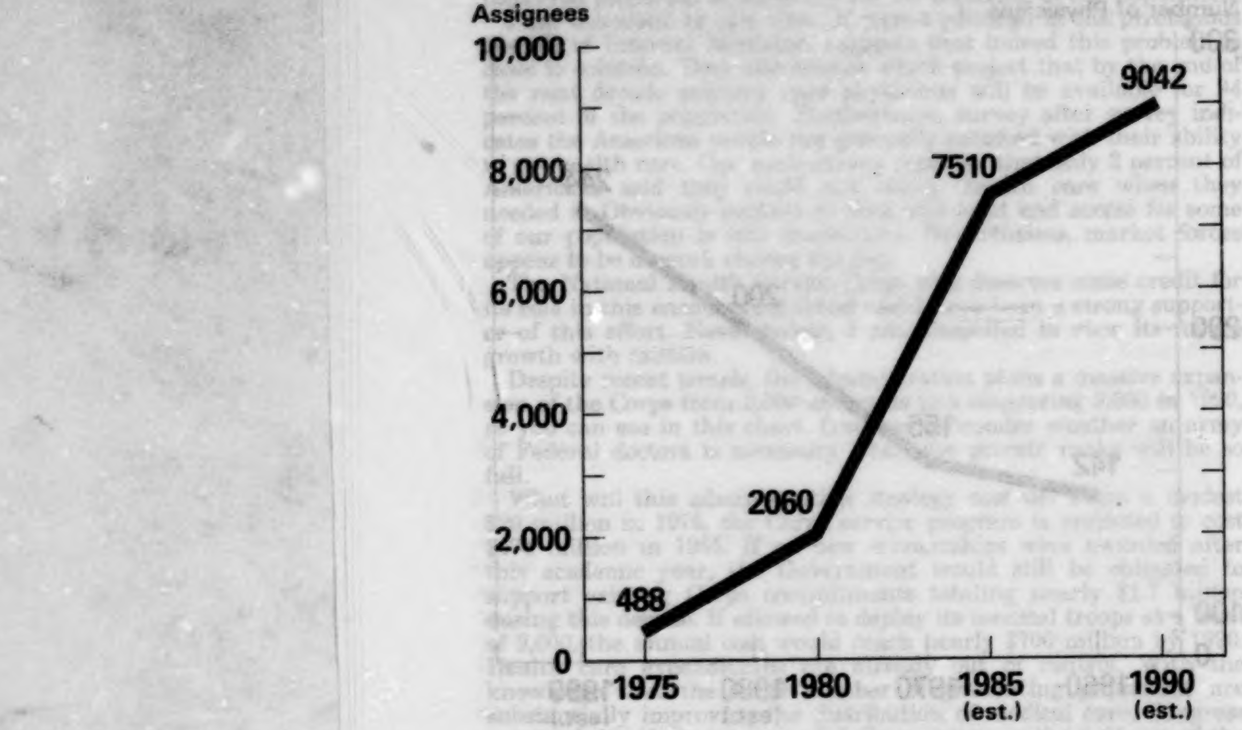
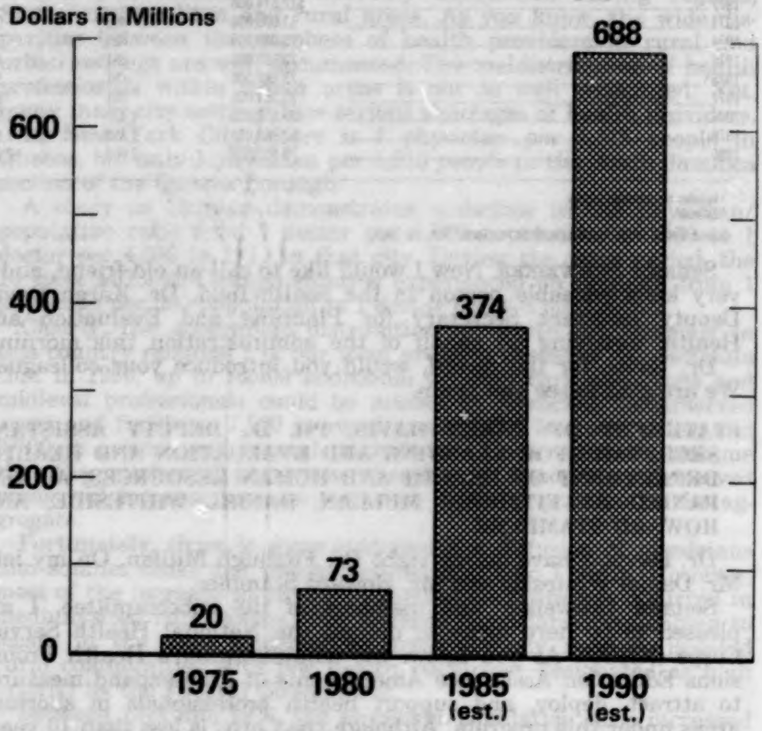
Projected NHSC Field Strength



Assumes constant scholarship and volunteer levels.

Source: Letter from George I. Lythcott, M.D., Administrator of HSA, February 19, 1980.

Projected Cost of NHSC



Assumes constant scholarship and volunteer levels; about 8% annual cost of living increase.

Source: Letter from George I. Lythcott, M.D., Administrator of HSA, February 19, 1980.

FUNDING HISTORY OF THE NATIONAL HEALTH SERVICE CORPS, THE NUMBER OF AUTHORIZED SLOTS FOR ASSIGNEES AND THE NUMBER OF ASSIGNEES ACTUALLY IN THE FIELD

Fiscal year	Appropriation	Authorized slots for assignees	Assignees actually in the field
1972	$12,574,000		
1973	11,000,000	405	330
1974	13,000,000	405	392
1975	20,180,000	551	488
1976[1]	23,980,000	701	596
1977	25,354,000	701	690
1978	30,696,000	1,425	1,280
1979	62,969,000	1,850	1,824
1980	72,900,000	2,060	[2] 2,050

[1] Includes the transition quarter.
[2] Estimate.

Source: Budget Office, National Health Service Corps, Sept. 18, 1980.

Senator **Schweiker**. Now I would like to call an old friend, and a very knowledgeable person in the health field, Dr. Karen Davis, Deputy Assistant Secretary for Planning and Evaluation and Health, testifying on behalf of the administration this morning.

Dr. Davis, for the record, would you introduce your colleagues. We are glad to see you again.

STATEMENT OF KAREN DAVIS, PH. D., DEPUTY ASSISTANT SECRETARY FOR PLANNING AND EVALUATION AND HEALTH, DEPARTMENT OF HEALTH AND HUMAN RESOURCES, ACCOMPANIED BY FITZHUGH MULLAN, DANIEL WHITESIDE, AND HOWARD STAMBLER

Dr. **Davis**. I have on my right Dr. Fitzhugh Mullan. On my left, Mr. Daniel Whiteside and Mr. Howard Stambler.

Senator Schweiker and members of the subcommittee, I am pleased to be here today to discuss the National Health Service Corps (NHSC). As you know, the administration's Health Professions Education Assistance Amendments of 1980 expand measures to attract, deploy, and support health professionals in shortage areas under this program. Although the Corps is less than 10 years old, it has had a significant impact in placing health professionals in underserved areas; some 2,060 physicians, nurses, and other health professionals now serve in 992 sites.

Today, I would like to summarize our knowledge of recent trends in the location patterns of health professions and briefly describe the role of the National Health Service Corps in meeting the need for health providers in shortage areas.

During the 1960's, the Nation faced a critical shortage of health professionals. Programs like capitation grants, construction, and startup assistance have been successful in increasing the aggregate supply of health professionals. Today, there are 435,000 physicians, 124,000 dentists, and over 1 million nurses in active practice. Our most recent estimates show that nationally, the average physician to population ratio is 1 physician per 519 people; the average number of primary care physicians per population is 1 physician per 1,438 people. In fact, our best estimates indicate that the projected supply of most health professionals will exceed the projected need for their services by 1990. For example, the Department is projecting a supply of almost 600,000 physicians by 1990 which may exceed need by up to 45,000. Our other estimates indicate the possibility of even larger excess physician supply.

While the overall supply of health professions is adequate, the Nation still faces a severe problem of geographic maldistribution. Health professionals are unevenly distributed among regions, States, metropolitan and rural areas. As you know, the wide disparities between the numbers of health providers in rural and urban settings are well documented. The maldistribution of health professionals within urban areas is not as well recognized. Yet, many inner-city settings face serious shortages of health providers.

In New York City, there is 1 physician per 1,319 people in Queens, but only 1 physician per 6,018 people in the South Jamaica section of the Queens Borough.

A study in Chicago demonstrates a decline in the physician/population ratio from 1 doctor per 1,000 population in 1950 to 1 doctor per 4,000 in 1970 in that city. During the same period, the 10 most affluent Chicago suburbs experienced an increase from 1 physician per 560 population to 1 doctor per 475 population.

Clearly, the geographic distribution of health professionals in this country remains 1 of our most pressing concerns. We estimate that in 1990, up to 16,400 additional primary care physicians and midlevel professionals could be needed in medically underserved areas and facilities: 7,500 in rural areas; 5,200 in inner cities; and 3,700 in prisons and mental institutions. These estimates assume that the number of physicians choosing to locate in underserved areas will increase because more are entering practice in the aggregate.

Fortunately, there is some evidence of a diffusion of physicians into smaller cities and towns over the past 5 to 7 years. However, most of the increase in physician-population ratios has occurred in medium-sized rural towns. Few of these physicians have chosen to locate in the most underserved areas—largely poor or isolated rural communities with few health resources—designated as high priority by the Federal Government.

Between 1971 and 1977, the physician/population ratio increased from 48 physicians per 100,000 population to 50 physicians per 100,000 in highly rural areas. This compares with an increase in the ratio from 72 physicians per 100,000 to 87 per 100,000 population in other rural areas—and an increase in the ratio from 146 physicians per 100,000 to 168 in metropolitan areas.

In high poverty areas, the physician/population ratio increased only slightly, from 68 physicians per 100,000 population to 74 physicians per 100,000 population.

In poor rural and urban counties, the problem is exacerbated because many physicians choose not to accept medicaid patients; 22 percent of primary care physicians have no medicaid patients.

Senator SCHWEIKER. Doctor, I agree with the point you are making that physicians refuse to accept medicaid patients. But might the point be that the medicaid reimbursement situation is out of whack? Sort of like a catch 22, if you do not pay doctors enough, they will not take the regular patients. But if you paid reimbursements comparable to other fees and charges, then in fact you may not have this problem at all.

Dr. **Davis.** It is true that there is a problem with medicaid reimbursements in some States. Pennsylvania has the lowest fee of medicare. So in a few States where the fees have been held at a low level, that is a problem.

We have proposed in the national health care plan to increase fees up to medicare levels to deal with that problem.

Thus, while the numbers of physicians in underserved areas have increased, these areas continue to lag significantly behind metropolitan areas in their ability to attract and retain physicians. It is hoped that this diffusion trend will continue and will eventually result in a more equitable distribution of physicians nationwide. However, during the 1970's, aggregate physician to population ratios increased 2.7 percent annually as compared to 1.5 percent annually during the 1960's, but highly rural and poor areas did not benefit proportionately from these large increases in the number of physicians. Further studies confirm that those areas with the most serious problems are likely to continue to show little improvement.

A recent study examining the location patterns of physicians who have located in rural communities between 1973 and 1976 concluded that two-thirds of these settlers chose towns where at least four other physicians were already in practice. Only 7 percent chose towns with no other physician in practice.

Moreover, physicians in the National Health Service Corps and the Robert Wood Johnson Foundation's rural practice project tend to go to the smallest communities. The percentage of rural physicians under both of these programs who settled in communities of under 2,500 population was approximately twice that as for those who settled through private practice.

Although very rural and poor counties have not solved the problems of geographic maldistribution despite the increased diffusion of physicians, we plan to monitor future location patterns carefully as the supply of physicians continues to grow. As we study the location trends that emerge over the next few years we will reappraise, as necessary, our strategies for meeting the needs of underserved areas.

We plan also to monitor closely the specialty choice patterns of physicians. Currently, only 40 percent of all physicians are primary care providers, although recent reports have suggested that at least 50 percent of all physicians should be in primary care.

Some studies have shown that specialists spend substantial amounts of their time—up to 40 percent—providing primary care services. This may increase access to basic primary care for some. However, we believe this to be a further indication of overspecialization—an imbalance between the supply of generalists trained to deliver primary care and the supply of specialists.

Whether specialists are the most appropriate or cost-effective providers of primary care is also open to question.

Basic primary care delivered by specialists is more expensive than that provided by generalists: Internists charge 50 percent more than generalists for a periodic examination and for a follow-up office visit.

Generalists are specially trained to treat the whole patient; specialists' training is more hospital oriented and relies more heavily on high technology.

Primary care physicians—especially family medicine physicians—are more likely than specialists to locate in rural and underserved areas. This is in contrast to specialists who tend to locate in metropolitan areas.

It is important to remember that the increased supply of health professionals and improved financing of health care services cannot alone attract providers to underserved rural and inner-city areas. While we find this prospect hopeful, we know that the multiple problems found in these areas—professional isolation, the lack of cultural and educational opportunities—are likely to affect location choices as much as potential income.

The Federal Government's chief vehicle for dealing with the problem of geographic maldistribution is the National Health Service Corps. NHSC practitioners available for field placement include scholarship recipients performing their service payback obligation as well as volunteers who choose to serve. Of the 2,060 Corps members practicing in underserved areas, 1,000 are scholarship recipients and 1,060 are volunteers.

I would like to point out that the National Health Service Corps, is of course, part of a much larger overall administration effort to improve access to primary care services for underserved populations. For example, the community health center program has more than doubled since 1976, from 302 to 872 centers and now serves a capacity of over 6 million people. Other important efforts are the migrant health, maternal and child health, and family planning programs. In addition, the medicaid program finances services for some of those unable to pay for medical care.

These major efforts are supported by health professions programs such as the primary care residency program which will help train approximately 7,000 primary care residents in the 1980–81 school year and the area health education centers program, serving nearly 14,000 students in 21 States in 1980.

The National Health Service Corps has made every effort to place health professionals in those areas of greatest need. In fiscal year 1980, 77 percent of all Corps professionals were placed in areas with the most critical shortages of health professionals. In establishing priority assignments for personnel, the Corps has included additional factors to insure that assignees are placed in the neediest areas. Priority for placement is now given to areas that not only have the greatest shortage of health professionals, but which also have high infant mortality, high levels of poverty, and high numbers of migrant farmworkers. Currently, 61 percent of Corps personnel are serving in rural areas; 39 percent are serving needy urban areas.

The Corps program must be flexible in order to respond to the wide differences among health manpower shortage areas. An isolated rural area may require a different health service delivery system than does an inner-city neighborhood in a major metropolitan area. Study findings indicate that those areas with the greatest general social and economic deprivation are also the most difficult in which to create a successful independent Corps site. Since many health manpower shortage areas are in economically depressed areas which have a continuing problem of attracting and retaining physicians, these areas will likely require continuing Federal assistance until the economics of the area change, or until a new method of financing health services is developed and implemented.

Increasingly, Corps members are being placed in integrated practice settings. Many communities lack providers because of the death or retirement of local physicians. The combination of NHSC and Federal primary care programs offers the advantage of creating an ongoing system of care which is not dependent upon a single individual or group of practitioners.

This strategy provides the physician with a clinical support system and adequate funds for maintaining facilities, records, and administrative and outreach staff—the physician acts as part of a health care delivery system. The coordination of Corps personnel and federally supported primary care centers enables us to reach high priority areas, and at the same time, provide some of the incentives for keeping providers in these areas by reducing professional and social isolation.

In fiscal year 1979, 65 percent of all Corps personnel were placed in integrated sites, a strategy which began in 1976 with the rural health initiative. The impact on retention rates is impressive: the retention rate has risen from 20 percent in fiscal 1974 to 53 percent in fiscal year 1979.

I would like to point out that the Corps has grown rapidly since 1971. As the program has grown, so has our understanding of the problems associated with recruiting, matching, and placing health professionals in underserved areas. We have learned a great deal about how to more effectively manage the NHSC and have benefitted from our experience during this period of rapid expansion.

The administration proposes to maintain the current number of scholarship recipients obligated to serve in the National Health Service Corps at roughly 6,700. This, in addition to volunteer recruitment, will enable us to build a potential field strength of approximately 9,000 professionals by 1990—or to meet roughly half the projected need. As I mentioned earlier, we plan to evaluate evidence of improvements in the location and specialty choice trends of physicians and to reassess this target, if necessary.

We also plan to work more closely with the States in meeting the needs of underserved areas. There are currently 46 State service conditional programs in 32 States. These programs have three major objectives: to improve access to medical schools for students; to increase the supply of health professionals in the State; and to provide students with financial assistance. Many of these programs also share the National Health Service Corps' major goal: to improve access to health care services in medically underserved areas.

But while there are a number of different efforts evident in the States, thus far, the approach tends to be fragmented and most of the programs do not meet the needs of the most underserved areas. This is due largely to a tendency to place individuals in areas most able to support a full time private practice physician. We intend to work very closely with these State programs which we believe can serve as a useful adjunct to the National Health Service Corps.

Our Health Professions Education Assistance Amendments authorize the Secretary to enter into cooperative agreements with the States to provide for closer accord in the placement of Corps personnel in federally designated shortage areas. These joint Federal-State efforts should increase State input into health planning and management, minimize unwarranted duplication of effort, and target all programs toward improving the supply of health professionals in shortage areas.

Thank you.

Senator **Schweiker**. Thank you, Dr. Davis.

Going back just a couple of pages in your statement—I guess it is page 10 for your reference—you say: "The impact on retention rates is impressive: the retention rate has risen from 20 percent in fiscal year 1974 to 53 percent in fiscal year 1979."

I gather by retention rate, you mean those that continue to serve in that community under Federal salary?

Dr. **Davis**. Either under Federal salary or private practice. Those who stay in that community beyond their service.

Senator **Schweiker**. I understand trom your office that only 14 percent of Corps assignees actually stay on in private practice.

Dr. **Davis**. A good number of them do stay on in these integrated health care——

Senator **Schweiker**. But is that not a low percentage? When we first adopted NASC legislation, the purpose was after they had served as a Federally paid physician, to encourage them to stay on in private practice in the same community. And only 14 percent do that.

I think it is fine to say 53 percent stay on, but if we just extend the Federal salary to them, and keep paying them as a Federal employee, that does not seem to be the purpose. The 14 percent is initially what we were trying to do.

Dr. **Davis**. I think you have to understand the kind of areas we give priority. We do give these areas priority, because they think these have the greatest needs. It is unrealistic to expect physicians staying in the high poverty, poorly insured areas will be able to sustain a private practice.

Senator **Schweiker**. That gets back to the financing program. Maybe the financing program is out of whack. Obviously, if you are not paying the going rate, nobody is going to go there. I think that problem is broader than just the Health Service Corps.

Mr. **Mullan**. To amplify from Dr. Davis' point, Senator, the figures over the last 3 years show 12 percent and 14 percent of those eligible to leave the Corps staying in private practice, as you have indicated. This means all those that finish either in scholarship obligations or a basic 2-year tour as a volunteer. Those figures have crept upward over the life of the program, starting from several percent only in the opening year of those.

Senator **Schweiker**. I think you have made progress in that respect. Again, I have been a supporter of the Corps up to this point, and I think it is serving an important purpose.

My questions about the future, I do not want to depreciate what you have done to the present time. I want to be fair about that.

Mr. **Mullan**. The placement policy which has been adopted, particularly over the last 4 years, in keeping with both the language of our current law, and numerous conference reports, have emphasized placements in most underserved areas.

As I think your staff is aware, over the last 2 years, as you know, perhaps we place all shortage areas divided in four categories; 01 being the most underserved, and 04 being the least underserved. We have placed 73 percent in 1978, and 77 percent in 1979 into these most underserved areas. They are areas in which the primary care physician to population ratio is 4,500. These are areas where physicians, where reasons are economic, social, cultural, and geographic. The point being that these areas are very, very difficult for the private sector to staff. We encourage more men to convert as much as possible.

But in the main, these areas have a poor track record of attracting or retaining private practitioners.

Senator SCHWEIKER. I believe your estimates are that there is a shortage of 17,500 practitioners in underserved areas in 1980. And by 1990, this will only improve by 1,100 people.

In other words, we will only alleviate the problem of the 17,500 shortage by 1,100 physicians in 10 years. I have trouble understanding how you arrive at that projection, because that is critical to your needs definition inasmuch as we expect 180,000 new medical and osteopathic physicians during this decade.

Are we saying during a whole decade, only 1,100 more will be going to the underserved areas?

Maybe I am missing something. Maybe there is a projection here that I am not aware of, but I would like to understand why that is the case.

Dr. DAVIS. The projections of need do take into account both the increases in the aggregate supply of physicians, and increasing distrubution of diffusion of those physicians into rural areas. But even taking that into account, we are finding the areas are increasing in population, and that it will take considerable numbers of physicians, too.

The way the estimates are done, we look at all those communities that have physician-population ratios of less than one to 2,000, and estimate the number of physicians it would take to bring those up to one to 2,000 levels.

In addition, in city areas we look at the Census tracts that have more than a 20-percent rate. Based upon studies, we know that about 70-percent of the needs in those areas are unmet. And from that estimate, the number of physicians required to serve those areas.

Furthermore, we have looked at certain institutions, such as prisons and mental institutions, and estimated the staffing requirements for those. So that we have overall about 7,500 in rural areas needed, 5,200 in city areas, and 3,700 in the prison and mental institutions.

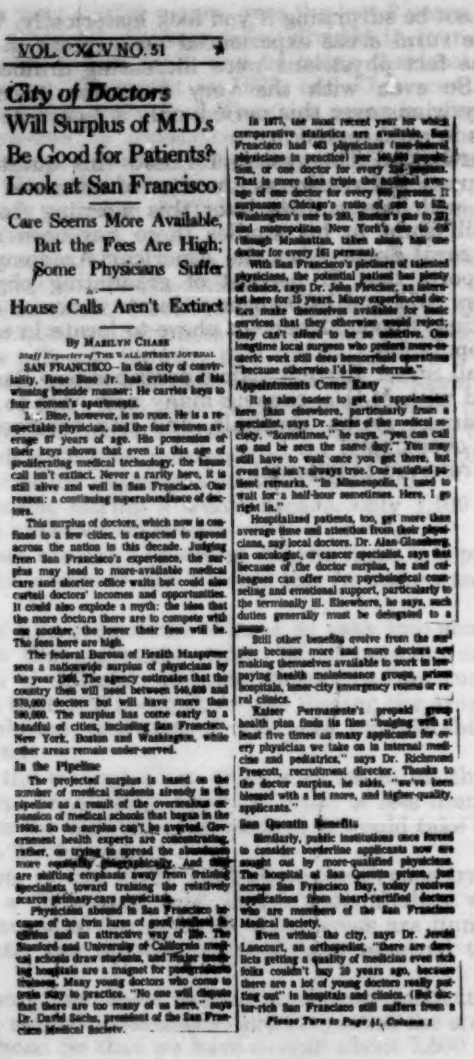
We have used a number of methodologies to try to get an estimate of need. We have always looked at the number of physicians it would take to bring rural residents up to the nationwide average, and minority populations in inner-city areas up to the averages. Needs of about 17,000 primary care physicians. So we have used a number of methodologies. They all indicate that even with the increase in physician supply there will be a very substantial need in these areas.

This might not be surprising if you look historically. We see from 1971–1977, the rural areas experienced no increase in physicians, in spite of the fact physicians were increasing dramatically over that period. So even with the very dramatic increase in the number of physicians over this period, only a 4-percent increase in the physicians to ratio served.

Senator **Schweiker**. The reason I raised this question, it is a pretty basic question, I realize as a matter of estimates and projections. But we will hear a little later this morning from Dr. Williams, who will show in his studies there has been diffusion of physicians to rural areas. Also, the American Academy of Family Physicians reports that 51 percent of graduating physicians between the years 1977 and 1979 chose to locate in towns of less than 25,000 population. About 11 percent chose to locate in a rural area under 2,500 population.

A recent Wall Street Journal article describes how San Francisco is oversupplied with M.D.'s, causing many new ones to practice in the outlying areas, prison hospitals, and city emergency rooms, because of the oversupply.

[The article referred to follows:]



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City of Doctors

Will Surplus of M.D.s Be Good for Patients? Look at San Francisco

Care Seems More Available, But the Fees Are High; Some Physicians Suffer

House Calls Aren't Extinct

By MARILYN CHASE
Staff Reporter of THE WALL STREET JOURNAL

SAN FRANCISCO—In this city of conviviality, Rene Bine Jr. has evidence of his winning bedside manner: He carries keys to four women's apartments.

Mr. Bine, however, is no roue. He is a respectable physician, and the four women average 87 years of age. His possession of their keys shows that even in this age of proliferating medical technology, the house call isn't extinct. Never a rarity here, it is still alive and well in San Francisco. One reason: a continuing superabundance of doctors.

This surplus of doctors, which now is confined to a few cities, is expected to spread across the nation in this decade. Judging from San Francisco's experience, the surplus may lead to more-available medical care and shorter office waits but could also curtail doctors' incomes and opportunities. It could also explode a myth: the idea that the more doctors there are to compete with one another, the lower their fees will be. The fees here are high.

The federal Bureau of Health Manpower sees a nationwide surplus of physicians by the year 1990. The agency estimates that the country then will need between 540,000 and 570,000 doctors but will have more than 590,000. The surplus has come early to a handful of cities, including San Francisco, New York, Boston and Washington, while other areas remain under-served.

In the Pipeline

The projected surplus is based on the number of medical students already in the pipeline as a result of the overzealous expansion of medical schools that began in the 1960s. So the surplus can't be averted. Government health experts are concentrating, rather, on trying to spread the abundance more equitably geographically. And they are shifting emphasis away from training specialists toward training the relatively scarce primary-care physicians.

Physicians abound in San Francisco because of the twin lures of good medical facilities and an attractive way of life. The Stanford and University of California medical schools draw students, and major teaching hospitals are a magnet for postgraduate trainees. Many young doctors who come to train stay to practice. "No one will dispute that there are too many of us here," says Dr. David Sachs, president of the San Francisco Medical Society.

In 1975, the most recent year for which comparative statistics are available, San Francisco had 463 physicians (non-federal physicians in practice) per 100,000 population, or one doctor for every 216 persons. That is more than triple the national average of one doctor for every [illegible] persons. It surpasses Chicago's ratio of one to 532, Washington's one to 283, Boston's one to 271 and metropolitan New York's one to [illegible] (though Manhattan, taken alone, has one doctor for every 161 persons).

With San Francisco's plethora of talented physicians, the potential patient has plenty of choice, says Dr. John Fletcher, an internist here for 15 years. Many experienced doctors make themselves available for basic services that they otherwise would reject; they can't afford to be so selective. One longtime local surgeon who prefers more-esoteric work still does hemorrhoid operations "because otherwise I'd lose referrals."

Appointments Come Easy

It is also easier to get an appointment here than elsewhere, particularly from a specialist, says Dr. Sachs of the medical society. "Sometimes," he says, "you can call up and be seen the same day." You may still have to wait once you get there, but even that isn't always true. One satisfied patient remarks, "In Minneapolis, I used to wait for a half-hour sometimes. Here, I go right in."

Hospitalized patients, too, get more than average time and attention from their physicians, say local doctors. Dr. Alan Glassberg, an oncologist, or cancer specialist, says that because of the doctor surplus, he and colleagues can offer more psychological counseling and emotional support, particularly to the terminally ill. Elsewhere, he says, such duties generally must be delegated to a nurse.

Still other benefits evolve from the surplus because more and more doctors are making themselves available to work in low-paying health maintenance groups, prison hospitals, inner-city emergency rooms or rural clinics.

Kaiser Permanente's prepaid group health plan finds its files "bulging with at least five times as many applicants for every physician we take on in internal medicine and pediatrics," says Dr. Richmond Prescott, recruitment director. Thanks to the doctor surplus, he adds, "we've been blessed with a lot more, and higher-quality, applicants."

San Quentin Benefits

Similarly, public institutions once forced to consider borderline applicants now are sought out by more-qualified physicians. The hospital at San Quentin prison, just across San Francisco Bay, today receives applications from board-certified doctors who are members of the San Francisco Medical Society.

Even within the city, says Dr. Jerold Lancourt, an orthopedist, "there are derelicts getting a quality of medicine even rich folks couldn't buy 20 years ago, because there are a lot of young doctors really putting out" in hospitals and clinics. (But doctor-rich San Francisco still suffers from a

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City of Doctors: In San Francisco, Surplus of M.D.s Is Mixed Blessing

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maldistribution of its physicians. For while downtown and the city's affluent northern crest are amply served, impoverished ghetto areas such as Hunters Point in southeast San Francisco require National Health Corps workers to fill the gap.)

Surrounding small towns and rural areas are beginning to share San Francisco's general wealth of physicians as young doctors migrate out of the city. According to the statewide Health Planning and Development Office, these nonmetropolitan areas improved their physician-per-person ratio more in the last decade than did San Francisco or any other metropolitan area in the state.

Among the young doctors who are shunning San Francisco is Wayne Keiser, an oncologist who trained at Stanford and Yale. He wanted to return here to practice but was told he would have to spend five to seven years getting his practice going. "I just wasn't willing to do that," he says. So he found a niche in Santa Rosa, a smaller city 55 miles north.

Why hasn't the overabundance of physicians brought lower fees? "The medical marketplace is complex; it isn't like selling tomatoes," says Uwe Reinhardt, an economist at Princeton. Far from driving fees down, some analysts believe, an oversupply of doctors may actually drive them up.

According to one controversial hypothesis, physicians "target" their income, and when more doctors compete for the pool of patients, fees rise to meet those targets. Though some physicians concede that their charges are higher in this situation, most hotly deny that they manipulate fees to achieve any dream salary.

"I'd love to increase my income by $20,000," says the medical society's Dr. Sachs, who is an ophthalmologist. "But if I raised my fees 20%, the patients wouldn't come." Besides, he and others argue, other factors influence fees here: a steep cost of living, high rents and astronomical malpractice premiums.

Further, many San Francisco doctors say that they and their West Coast colleagues make lower incomes than their counterparts in the Midwest or the South—a pattern recently confirmed by a survey in Medical Economics magazine. One specialist here relates he turned down a 300% increase in salary in Iowa so as to practice within sight of the Golden Gate Bridge.

High but Not Highest

While San Francisco doctor fees are high, they aren't the country's highest. A study of specialist fees by the Health Care Financing Administration in Washington found San Francisco 24% higher than the national average. (Manhattan fees were the highest, at 82% above the average. Then came the Greater Miami area, 42% above average; Los Angeles, 31% above; and Las Vegas, 29% above.) The prevailing charge for an appendectomy in San Francisco is listed at $641.88, well above Boston's and Washington's $368.50 but far below Manhattan's $784.36. For an initial comprehensive office visit to a general practitioner, Medicare says, the prevailing charge in San Francisco is $60, compared with $65 in metropolitan Los Angeles, $50 in Washington, $46 in Dallas.

Fears that the doctor surplus would lead to unnecessary surgery, as doctors sought to add to their incomes, seem to have proved unjustified. In fact, the San Francisco Peer Review Organization found that the city falls below the national average more often than it exceeds it in 16 common surgical procedures. Surgeons here do fewer prostate-gland removals, hysterectomies, gallbladder operations, hernia repairs and hemorrhoid surgeries, while they do more cataract operations, mastectomies, total hip replacements and colon resections.

Doctors agree that professional overpopulation is changing the shape of private medical practice in San Francisco. Some young physicians and even some older ones find themselves underemployed, languishing for lack of interesting cases, forced to moonlight, or even reduced to relocating their practice.

Competition for referrals is intense in this crowded marketplace, and some new specialists expand their caseloads to include some general medicine.

A Dwindling Practice

Some established specialists, too, say their practices have dwindled. Dr. David Smith, a radiologist, says his volume has declined 20% to 30% in the past two or three years. He and his two partners had to let a young part-time associate go because "there wasn't enough work for 3½ doctors."

A general surgeon with a 20-year practice confides he is only half as busy as he would like to be. "I've gone a week sometimes without doing a single major case, and I'm bored stiff," he says dispiritedly. "Anybody starting out in general surgery today has to be a damn fool."

For new entrants, sometimes the only way to make it is to moonlight. "It's tough, very tough," says Dr. Michael McShane, a young internist who works part time in a hospital clinic while building his fledgling practice. "There's no way you can survive without it," he says. Others do insurance physicals, review disability claims or moonlight in emergency rooms. Practicing surgeons often serve as an assistant on operations.

For others, nothing helps. Dr. Barry Kramer, a 33-year-old cardiology fellow, pronounces the job market here "grim" after six months of unrewarded searching.

Still another specialist, frustrated by a sluggish practice, recently packed up his family and moved to the Sun Belt, where he expects to find a lucrative high-volume practice. "It was," he says, "the most difficult decision of my adult life."

But most stick it out, and there is no indication that San Francisco's physician pool is declining. "I make 50% less than my counterparts elsewhere," one doctor says. "But on a day like today when I drive to work and look out across the San Francisco Bay, I know why I stay here."

Senator **Schweiker**. It is sort of an effect, when you get a glut, people go to the areas where there is no glut. If everybody agrees, there is a glut, why would we not assume that the physicians we dump on the market in the next decade would go to where the vacuum is?

Dr. **Davis**. From 1970–1977, population in these rural communities increased 11 percent, but the physician supply only increased 2 percent. So there were dramatic declines in the small areas.

Second, they lump all rural areas together. They do not differentiate. There have been increases in physicians, but when you look at those areas, high poverty rates, or the most isolated rural areas, we find very little change in physician per capita over this area.

Third, the Rand studies have not looked at trends relative to population, they only look to the percentage of communities. To really get a handle on that, you really need to look at physicians per capita. For example, they find 100 percent of the large towns have physicians of a certain type, whereas maybe 20 percent of the smaller towns would have a particular physician.

If you look at it in physician per capita terms, what you will find is those large metropolitan areas have increased their physicians to per capita ratios far more dramatically than the medium-type towns.

So I think you really have to break down some of the evidence. While it is encouraging, we are getting more physicians in the larger rural places, we do not see evidence they are getting into the priority areas.

Mr. **Mullan**. On the size of the Corps itself, the magnitude is important to keep in perspective. Right now with the Corps field strength of about 2,000, about 50 percent are physicians. That represents about one-quarter of 1 percent of the physician manpower in the country.

Under the 10-year forward plan, which was characterized as 9,000 physicians, in fact the forward plan calls for about 7,000 physicians. That would represent something slightly over 1 percent of the national physician bank.

So the size of the resource that the Federal Government would purport to channel into areas that deliver equity and services is a rather small portion of the total pie, at least looked at from a percentage point of view.

Dr. **Davis**. I might also add, that is the case in terms of the dollar expenditure for the Corps. A budget of about $700 million by 1990. But you have to bear in mind, by 1990 the total will be over $700 million. So we are talking about one-tenth of 1 percent.

Senator **Schweiker**. Of course, one of the real basic parts of your estimate is how to designate a health manpower shortage area. Whatever definition is used, of course, becomes very critical as to whether an area has a shortage or not.

As I understand it, California, which is fifth in the country in terms of number of physicians per capita, has had 47 counties or portions of counties out of its 58 counties designated as underserved. I think the question is how do we make the designation process sensitive to localized improvements in physical distribution of physicians. Because it seems to me, if 47 out of 58 counties, and portions of them are so designated, we have a pretty broad-scale definition of what an underserved area is.

Dr. **Davis**. While there may be an aggregate supply of physicians, there are distribution problems across the country, and that is also true in the States. We know the San Francisco area has a great many physicians per capita, but that is little comfort to the counties in the valley that have large poverty populations.

I would like to ask Mr. Howard Stambler to elaborate on our distribution process.

Mr. **Stambler**. The process in which the areas are designated is one which takes place in very close coordination with the States' health plan development agencies within the State, and with the Governor's office. We have had, as part of the process, that anyone can recommend a designation, and the information provided, which then is compared with the criteria and the requirements of the legislation. Then they are sent to the HSA, the State health training agency, and the Governor's office for review and discussion on the facts of the case, and for a recommendation, or whether or not a particular area should be designated.

In the case of California, it is not essentially counties, it is a very large number of areas that are designated, and these are within other areas. They are part of areas of neighborhood communities. Many of them are very rural. The designation in each of these is one which is worked on and coordinated with the State and the health systems agency and the Governor's office.

Senator **Schweiker**. Going back to that Wall Street Journal report, I would like to read it because a State health planning and development office would obviously have a more neutral position on this thing.

> Surrounding small towns and rural areas are beginning to share San Francisco's general wealth of physicians as young doctors migrate out of the city. According to the Statewide Planning and Development Office, these nonmetropolitan areas improved their physician-per-person ratio more in the last decade than did San Francisco or any other metropolitan area in the state.

So there is an indication that when a glut exists, physicians disperse out into the towns and areas with less population. Is there any attempt to measure this in some way?

Dr. **Davis**. That may be the case in San Francisco. But I think if you look at metropolitan areas as a whole, you will still find a more rapid increase in the physician to capita ratios in large metropolitan areas, and even surrounding areas, than in many rural areas.

Mr. **Mullan**. If I might add one point there, that the process by which objective agencies monitor this process is on the designation process which makes an area eligible for Corps placement. They also monitor the placement application itself. When a community in that county applies, the health systems agency has an opportunity to comment upon and approve or disapprove the actual assignment of Corps men to that area.

That has been inserted, not in the law, but by regulations developed and mandated by the Department itself. So we ask the health system agency to monitor for us. We have currently 87 Corps professional in California, which is one of our largest States. It ranks behind the State of Pennsylvania, in which we currently have 120 Corps professionals assigned, which is the second largest in any State.

Senator SCHWEIKER. How many areas are designated as underserved areas?

Mr. MULLAN. In the medical primary care category, they are primary care designations, dental designations, and a series of others, which are separate. The figure is roughly 1,800 areas. These can be counties, trade areas, or parts of counties.

Senator SCHWEIKER. How many of those 1,800 have been dedesignated? In other words, how many have we said OK, for *x* years you have been underserved, and now you are adequately served, and therefore no longer need this definition applied to you?

Mr. STAMBLER. I cannot give you an exact figure, but——

Senator SCHWEIKER. Do you have an estimate? I hear it is hard to get dedesignated.

Mr. STAMBLER. It is equally difficult to be designated and dedesignated. I do not have the number. I would suspect it is not gigantic, but it has occurred, that kind of activity in the last year or so, and particularly in the last 6 months as these areas do provide proper service.

I might add one other thing. On that California, of those 50 or 60 areas designated, only 9 of them are priority 1 and 2. That is areas that have the worst situation.

Senator SCHWEIKER. We had an instance reported to us in Virginia, where the local HSA voted 21 to 1 to dedesignate an area, saying they no longer wished to have a federally salaried person there. The Department of Health and Human Services decided, in spite of the 21-to-1 vote, to place somebody there anyway.

It seems to me a health systems agency saying we do not need any more, 21 to 1, ought to be a pretty good trigger.

Dr. DAVIS. I am not familiar with the situation in mind, but we will check into it and provide the information.

Senator SCHWEIKER. I would be interested in knowing the specifics.

In other areas, you have encouraged—and I think it is good, and I want to compliment you for it—midlevel practitioners to participate. I think in some rural areas that is vital and important. I know your assignments include them, and that is a plus.

As I understand your formula in determining need, you only count physicians, per se. I have no argument with placing middle-level persons in funded sites. I think that is an excellent approach. But it would seem your formula ought to also take into account if a midlevel practitioner already practices there, and is meeting *x* percent of the need.

Why do we not take into account the midlevel practitioner to calculate the need?

Mr. STAMBLER. The midlevel practitioners are taken into account currently in that they are examined for the services they provide. Unfortunately, there are no actual adequate criteria to evaluate this situation on a nationwide basis. It means that the area very often is unable to provide the kind of information needed to evaluate it on a National, State, and local basis.

Dr. DAVIS. I might indicate that while we do not have systematic data on the availability of practitioner physicians across the geographic areas, that is obviously some consideration on the health planning agency, and that is input that comes informally through the consultation process.

Senator **Schweiker**. In the designation of underserved areas and placement of your National Health Service Corps physician, there is supposed to be consultation with the local health systems agency and the local medical or dental society as to whether they concur or not.

We have had some reports where not only was it not taken into account, but the Corps came in and opened an office next to a private practioner already there. Why do we have a policy like that?

Mr. **Mullan**. We certainly do not have a policy of putting corpsmen next to private practitioners, in a departmental way. There are a number of situations where we have corpsmen practicing in conjunction with the private practitioner, at their behest. You can well appreciate that with a nationwide medical practice run through 10 regional offices there are problems with precise management of it, which as Dr. Davis indicated, we have learned a good deal about it. I certainly cannot speak definitively that each placement is not without problems.

We do take into account for the assignment process the comments of local professional societies. There is a 60-day period for comments. If indeed your staff has found situations where we have inappropriately placed people, we would be eager to engage over those. Our policy clearly is placement in areas that do not invite competition.

The perception of local practitioners, as I am sure you can appreciate, is that any Federal physician is competition in their State or locality. And there will be feeling they are being threatened by encouragement of field employees. This is something we are eager to work with in a positive way.

The bottom line for us in the law is to provide practitioners for patients who are needy.

Senator **Schweiker**. A few that have come to our attention, where they actually open up a Health Service Corps doctor next to a private practice service is Grayson County, Va.; Cottle County, Tex.

I would be glad if you looked into it. Maybe it is justified or is not. I recognize there may be two sides of the story. But I would appreciate, and would like, after we give you the details, to maybe get some response for the record as to what the situation was.

You said about 65 percent of the corps personnel were assigned to federally funded health centers. Private physicians are not going to set themselves up in a community right next door to the federally funded health center.

The very technique we use here is completely counterproductive to having physicians remain in these communities indefinitely. If you have a physician assigned to a federally funded health center, he is not going to leave there and open up his shingle and compete with Government subsidized medical care.

It becomes self-defeating. We give a provider an incentive to stay on at the Federal salary or to go on and move somewhere else where he is not in competition with the Federal Government.

I wonder how we can avoid that sort of catch 22?

Dr. **Davis**. As I indicated, most of these areas where we place our primary care centers are high poverty areas, where it is difficult to sustain a private practice.

We have an evaluation of the health care program where we look at medicaid versus those served by the private sector. We are finding the cost per capita is $50 lower for medicaid served through the community health centers. So we do feel this is an efficient way to provide services. Many times the salaries are somewhat less than would be the basis in higher income cheaper service areas. So we do not see anything detrimental by having these programs in these communities. They are meeting a serious need, and provide services in a very cost-effective manner.

Mr. **Mullan**. To amplify just a bit on that, the situation with the corps, the 65 percent which you accurately cite, about half of those are people assigned to rural health initiative programs. A rural health placement resembles what we call a freestanding corps site in every respect, with the exception that there is usually a modest Federal rural health initiative grant, $150,000 to $200,000 to get it going. So what we are talking about, in the main, are small, rural placements of this sort.

The other point germane to this is that the rural health initiative program, as indeed the community health center program, where the Federal Government puts dollars into these communities, has had significant problems recruiting physicians to staff those centers. Either there are no physicians available, or the type of manpower is on a part time basis, without the kind of accountability you and I would want. The Corps addresses that.

And finally, I might point out, I think you will be hearing testimony from the Robert Wood Johnson Foundation. In their efforts, in both the rural and urban areas, I believe their experience has borne out that if you go to very underserved areas there is tremendous difficulty sustaining those practices. Both in rural practice, and now in their new urban efforts, there has been an effort to look to the other major source of support to keep the practices going, and that, of course, is the Federal Government. So it is not a question of the Government out there and creating non-self-sustaining practices.

The point is, when one goes into these areas the question of sustaining of practice, be it private or Federal, the question of sustaining is a very, very critical one.

Senator **Schweiker**. Here we have a philosophical difference, but I would like to at least get it in the record. I think from the original concept of the National Health Service Corps we now have another concept taking over. It may be somewhat beyond the people here, but I would like to know why we have abandoned our initial concept.

Earlier, when the House held oversight hearings, Dr. Richmond said this about the Health Service Corps:

> This program balances the Administration's National Health Plan design to provide the financial underpinning, the reimbursement for care. In fact, it is important to point out that much of the cost in financing the services provided by Corps personnel will come from payments under the National Health Plan.

What Dr. Richmond is saying here is: We never expect these things to be self-sufficient. Our objective is to provide something that ultimately will be picked up under the national health plan. This is a mechanism that we will later reimburse.

Maybe you want to comment on that statement. I will give you equal time. He admits we are not really trying to make them self-sufficient, or have them switch over to the private sector, but we are going to eventually pick up the tab.

Dr. DAVIS. Some of these reimbursements under the national health plan will not be Federal but private dollars. One of the problems in rural areas is that agriculture and small manufacturing are the primary employment in those areas. These are the types of firms that have very little private insurance coverage.

What the plan would do, would mandate that the employers' insurance for the workers—and more individuals would have private insurance—and those plans could pick up some of the fees. So that I do not think it would be substituting one Federal dollar for another, but reimbursing.

Senator SCHWEIKER. Does the Department encourage National Health Service Corps physicians to buy out their practice if they wish to stay in the community at the end of their obligated service?

In other words, can they, if they desire to stay there, pay the Federal Government the required amount for its investment so they can serve as a private physician.

Mr. MULLAN. Absolutely. The situation, in point of bricks and mortar and equipment is not a great one in most instances, since the moneys we put into the communities do not buy great quantities of bricks and mortar. The one exception is the dental area. And in those circumstances, we have provisions where the community and/or the practitioner may purchase that equipment at fair market value. We would encourage that as much as possible.

Senator SCHWEIKER. I am glad to hear you say that. I think that buyouts are a part of at least the original concept and a way of transition from the federally supported position to the private.

I have a memo here from region V of the Health Service Corps that concerns me, however.

> Given this philosophy and approach, buy outs will no longer be allowed unless the entire project terminates. In other words, funds for some services or administrative support will not continue unless medical and dental services are also under the project's administrative control.

It is clear that at least in this region they seem to be operating on a different policy than what you express.

Mr. MULLAN. I am not familiar with the memo and its contents. When referring to projects, that sounds to me like referring to community health center projects. CHC's, rural health initiatives. And the term "buy out" is not one we refer to in terms of corps personnel.

Senator SCHWEIKER. We will supply you with that memo.

Mr. MULLAN. But in terms of people, manpower, we do encourage their converting to private. I would also add, I think it would be interesting to the Senator, there is in the law a private practice option which speaks to scholarship-obligated individuals joining, not as Federal employees, but filling their obligations as private practitioners.

We are in the midst of attempting to make that a viable option for scholarship-obligated individuals. That is, they never would join the Federal Government on the payroll, but enter directly into private practice.

We are working with the AMA, the AHA, the Adventist hospital system, and various intermediaries and communities, attempting to design non-Federal placement for Corps-obligated professionals. Our hope this year is to place some 2 to 400 individuals who are scholarship eligible this year in that capacity, so they could go directly into non-Federal, private practice. That is at their option. So we cannot automatically force it upon them, but we are attempting very good faith efforts to reach intermediaries for the placement of these people as private practitioners.

Senator SCHWEIKER. They do define in this memo a buyout. We will put it in the record and give you a copy, and give you a chance to respond.

[The following was received for the record:]

MEMORANDUM

DEPARTMENT OF HEALTH, EDUCATION, AND WEL
REGION V – CHICAGO

DATE: February 13, 1980

TO: RHI/HURA Grantees

FROM: Daniel L. Larsen, DL
Regional Program Consultant

SUBJECT: For Your Information

Spring RHI Conference

The Regional Rural Health Conference will be held this spring on Tuesday, Wednesday, and Thursday, April 29-30 and May 1, at the Radisson Hotel here in Chicago. The RHI Project in Anna, Illinois will be the co-sponsor and handle all reservations etc. The Radisson has promised us that all of our sleeping rooms will be newly renovated.

A major focus of the conference this spring will be training and information for board members. It is extremely important to us that at least two of your board members attend. Please identify these two members and contact your project officer to verify their attendance. If it becomes necessary we will compress the board training into one of the three days, so that more board members can attend.

Funding Plan & Grant Review

The FY'80 Funding Plan & Grant Review Cycle is now established and will be sent out to you shortly. In the meantime, please contact your project officer about your funding level and review date.

New Grants Available

HURA R&D (sec. 340) - Five-year research and demonstration grants are available to demonstrate: (1) recruitment and retention of physicians; (2) the integrations of health services; and (3) the impact of primary care on ER utilizations.

"ENERGYWISE ECONOMIZE"

Hospital Based Primary Care (sec. 328) - Operational grants are available to convert hospital ER's into ambulatory care centers. Only one of these grants will be made in Region V.

The deadline for preparing and submitting both grants to HSA's is April 15. Let me know if you are interested in either program.

Program Reminders

In case there is still confusion, RHI's have to do the following. These items (among others) will be checked at the time of grant review.

a. Have current, signed Memorandums of Agreement and Principles of Practice with NHSC Providers, and similiar practice agreements with non-NHSC Providers.

b. Adopt and inform clients about a sliding fee scale.

c. Provide family planning services which are equivalent to Title X services.

d. Take Medicare assignment (i.e. the RHI bills Medicare and does not bill the client for the difference).

e. Become certified to provide EPSDT services to Medicaid-eligible children.

f. Have a written pharmacy contract.

BCRR Training

Between now and the spring RHI conference there will be individual state training sessions on the BCRR and other financial or administrative policy changes. These conferences will be led by the Regional Consultants from Medicus and Family Health Inc. The agenda for each conference will vary depending on the needs of the projects in that state. One RHI project in each state will be asked to make arrangements for that state conference.

PUFF (Proposed Use of Federal Funds)

Attached is a copy of the new PUFF Regulations governing HSA review of Federal Programs.

Re-designation

BCHS is becoming concerned that some NHSC assignees are still being recruited for projects in areas which could not be re-designated as Health Manpower Shortage Areas. I would suggest that you satisfy yourself and have some documentation that your HMSA can be re-designated. Non-NHSC providers who are employed by your project count against the HMSA.

Buy-Outs

A "buy out" occurs when a local provider buys an NHSC or grant supported practice.

This was encouraged in the early days of the Rural Health Program when it was assumed that a project would receive only three years of grant support and would have to become self-supporting at that time.

More recently, it has been recognized that an RHI project cannot become self-supporting and still provide the full range of sec. 330 services to all persons regardless of their ability to pay. Consequently we are now assuming that currently funded RHI's will continue to receive funding as long as our Appropriations continue.

Given this philosophy and approach, "buy outs" will no longer be allowed unless the entire project intends to terminate. In other words, funds for some services or administrative support will not continue unless medical and dental services are also under the project's administrative control.

Many boards and providers are still under the impression that "buying out" is the goal of the program. Please communicate to your board and providers that this is not the case.

Mid-Level Practitioners

Attached are two memos relating to malpractice insurance and prescriptive practices for mid-level providers. Please make sure that your mid-levels are practicing in accordance with state laws (get a legal opinion if you have any questions), are covered by malpractice, and are following the correct prescriptive procedures.

Senator SCHWEIKER. Secretary Harris recently reported to Congress that just under $1 million was collected by the U.S. Government under its payback requirement of the Corps. Under the payback provision, when a local facility subsidized with a physician paid a Federal salary accumulates a surplus, it is expected to pay back that surplus to the Federal Government.

My question is why is it only $1 million? That seems like a very low figure.

Mr. MULLAN. This is an area in which I think the performance of the corps has not been as good as it perhaps should have been. I will be quite candid to say that. Our situation is as follows:

As you are aware, the corps law invites reimbursement to the Federal Treasury on the part of communities, some portion of the indebtedness that they incur by having corps professionals assigned there. The law also envisions a waiver on the basis of needs within the community, and this is the liberal waiver policy written into the current statute.

In 1976—actually, 1977, when the new law came into effect—we changed the entire billing procedure in accordance with that law. It did envision broader waivers, and invited a far more complex system of waiver. That system is still not up to snuff in terms of its administration.

There is a number of millions of dollars of outstanding bills during the last several years which will be accruing to the Treasury under the billing policy as we now have it.

Significant for you to know is that in 1976, when we realized the maximum number of dollars back from communities, it represented something on the order of 15 percent of the program's authorization.

In other words, of the funds authorized for the program in that year, somewhere between 15 and 20 percent were recaptured by the Federal Treasury. We think under optimal circumstances this is certainly a level that could be expected, and we anticipate that the situation will be in before long.

Senator SCHWEIKER. I appreciate your candor on that answer. We do appreciate your willingness to look into it.

We have a few, such as Aberdeen, Wash., where in fact they held the money in escrow to give it back to the Federal Government, and the Federal Government said forget it. You answered it fairly. I think it does help to put money back into the system.

Mr. MULLAN. If American Express can bill monthly, we should get to billing yearly, and we will.

Senator SCHWEIKER. That is all of the questions I have. I do appreciate your frankness. This is an oversight function. My direction is where to determine we are going.

I think in the last few years we made good progress, and some of the problems have improved and I certainly think there this is a role for the corps. I tried to focus this morning on how we define it, what its purpose is.

Mr. MULLAN. Could I leave one thought, not at all as a last word?

One problem in managing the program is the difficulty in doing community development and placement work with people which requires really an 18-month or 2-year lead time, and the annual authorization process.

Senator SCHWEIKER. Which is really messed up right now. [Laughter.]

Mr. MULLAN. The law does not envision the possibility of advanced authority. And a 1-year advance track to give us a lead time to do the work, rather than calling people at the last minute and telling them they are hired or fired. We can live with that, and manage it, but if we can know in a sufficient amount of time in advance to make reasonable human and public health judgments, it will make it a far more credible program than doing the 29th of the month execution, or emergency hirings, as we are often forced to do.

Senator SCHWEIKER. I think that is a very valid suggestion, and we will let the record show that when the act comes up for review next year that this is an area the committee should consider doing something about that would help your management.

Thank you very much. I appreciate your participation.

I have a few questions from Senator Cranston which I will submit for the record and ask the Department to respond.

[The following was received for the record:]

QUESTIONS FOR THE RECORD FROM SENATOR ALAN CRANSTON

Section 333 of the Public Health Service Act provides that Corps members may be assigned to a federal health-care facility, upon the request of the head of the department or agency of which such facility is a part.

A. When the Department of Health and Human Services has had more health personnel available for assignment than it has money to cover their costs, have you explored with the Veterans Administration the possibility of assigning the excess personnel to that agency's hospitals and clinics?

B. If so, with what results?

C. What steps do you believe would be needed in order to develop procedures under which excess National Health Service Corps personnel can be assigned to Veterans Administration health-care facilities?

[NOTE: Responses to the above questions were not received by the committee in time to be included in the printed record.]

Senator SCHWEIKER. Now I call as our next witness Dr. David E. Rogers. Dr. Rogers has been president of the Robert Wood Johnson Foundation in New Jersey since its emergence as a national philanthropy in 1971. Before joining the foundation, he served as vice president for medical affairs at Johns Hopkins University, and dean of their medical school. Dr. Rogers is a distinguished researcher on health care problems in this country, and has authored several books and articles.

Also, Dr. Albert Williams. Dr. Williams is director, health sciences program at the Rand Corp. in California. He has directed many of the excellent studies completed by Rand in the health field. He is accompanied by Dr. Joseph Newhouse, associate director at the Rand Corp., and also a distinguished researcher.

Today Dr. Williams and Dr. Newhouse will share some observations gleaned from their work regarding physician supply and distribution.

I call on Dr. Rogers. We welcome you here, and you may proceed, Dr. Rogers.

STATEMENTS OF DAVID E. ROGERS, M.D., PRESIDENT, THE ROBERT WOOD JOHNSON FOUNDATION, ACCOMPANIED BY DR. ROBERT BLENDON, SENIOR VICE PRESIDENT, THE ROBERT WOOD JOHNSON FOUNDATION, AND HEALTH ECONOMIST AND PLANNER; AND DR. LINDA AIKEN, ASSISTANT VICE PRESIDENT, THE ROBERT WOOD JOHNSON FOUNDATION; ALBERT P. WILLIAMS, PH. D., DIRECTOR, HEALTH SCIENCES PROGRAM, RAND CORP.; JOSEPH NEWHOUSE, PH. D., HEALTH SCIENCES PROGRAM, RAND CORP., A PANEL

Dr. ROGERS. Thank you very much, Senator.

You have my written statement before you. It is short. I think it is fairly carefully researched, and what I would like to do is make a few comments regarding that, and show you a few charts, some of which are embarrassingly similar to yours.

If I may, let me introduce my two colleagues. Dr. Robert Blendon, senior vice president of the foundation, a health economist and planner; and Dr. Linda Aiken, assistant vice president, a nurse, presently president of the American Academy of Nursing.

My message is a very simple one, and I can make it short. I have been very intrigued with the dialog today. For the first time we are indeed turning out adequate numbers of doctors to supply the American people with the medical care they need. And you have explored that in some detail.

I hope I can show that in some of the data we are going to present to you that in spite of the numbers of doctors there are still some groups of people who remain underserved, and it does not look as though simply numbers of doctors will solve that problem.

Dr. Blendon recently coined the term "structural underserved," and I like that. It is rather analogous to the structural unemployed.

What I am going to suggest is there are a group of special Americans that seem to have trouble getting medical care.

Senator SCHWEIKER. How much does the reimbursement system have to do with that?

Dr. ROGERS. I think it has a significant amount to do with it.

The data I am going to present to you comes from four large studies, two of which were funded by the Federal sector, two of which we funded ourselves.

And, Bob, could you just put the chart up? My apologies to the audience.

We have put handouts back on the tables, if you would like to see them, but I ask that the charts be turned toward the Senator, so that he can see them.

The first really simply reinforces some things you have already said, Senator, that we have made in the last couple of decades some very remarkable gains in improving personal access to care.

The point I am trying to make here, this really is simply showing the number of physician visits per person per year, and showing that the poor, who were significantly underserved in the past, are now reaching parity with those in higher incomes in terms of their numbers of visits to physicians per year.

Senator SCHWEIKER. In other words, the gap has significantly closed in terms of white and nonwhite?

Dr. ROGERS. Yes, sir.

Excuse me. This is with blacks; yes. Now, black people are seeing physicians with almost the same frequency as with white people, and this was not the case sometime ago.

Senator SCHWEIKER. That is over a period of how long?

Dr. ROGERS. From 1964–78. But the major gains have been those during the late sixties and the seventies.

Senator SCHWEIKER. What do you think were the reasons for the major gains from 1964–75?

Dr. ROGERS. The major one is the increasing number of physicians that you have already alluded to. The second are Federal payment mechanisms, medicaid and medicare. Those are the major contributors to that.

The next chart shows the same improvement, if one is poor. Here the differences are even more dramatic, as I think you can see. Those who are poor, who obviously have greater illness burdens, are now seeing physicians more frequently than those who are nonpoor. And that is very exciting data that we should not lose sight of. We have made major strides in getting people to physician services.

Senator SCHWEIKER. In other words, back in 1964 we were 4.7 to 3.8?

Dr. ROGERS. That is right.

Senator SCHWEIKER. In other words, about a nine-tenths of a visit less for the poor than the nonpoor?

Dr. ROGERS. We are seeing them about 30 percent less frequently; that is correct.

Senator SCHWEIKER. Now, in 1978, they actually had 6.2 visits versus 5, so you are 1.2 visits more frequent among the poor than nonpoor. That surely has to be due to medicaid.

Dr. ROGERS. That is, indeed. Plus the increased numbers of physicians that you have already mentioned.

Bear in mind, these are aggregate data. This is the population as a whole, and comes from your own National Center for Health Statistics.

We have not done quite as well in rural areas, and that was alluded to, I think, by Dr. Davis. But the trend is in the right direction, as you can see. The number of visits by those in rural areas is beginning to move up toward those in your urban areas.

Senator SCHWEIKER. They appear to be headed together. Do you see that trend continuing, of the two intersecting, or not?

Dr. ROGERS. I am not sure. One chart I will show you subsequently makes me worry about what it is. But we have widely publicized the data, and it says as a Nation we are making significant progress.

One caveat here. This is physician visits, and physician visits can mean a lot of different things. It can mean sitting on a hard bench in a waiting room to see a physician you have never seen before, or the kind of visit you and I make to our personal physician.

I think, along the lines of your questioning this morning, there is a fair amount of evidence to suggest that having a physician who knows you, and you know, is a significantly better interaction, in terms of health, than impersonal kinds of systems in an outpatient department, or somewhere where you do not have that 1-to-1 kind of experience. I have indicated that in the testimony.

Let me turn to the studies that were financed by us in an effort to give you some feel of how many people do have a personal physician nowadays. These are the results of two studies, one done by a competent group at the University of Chicago with a sampling of about 8,000 people in different households who were asked the simple question do you have a doctor, can you tell us who he is, can you name him by name. I think that is significant.

If you look at the first column, really, to our surprise—this is 1976 data—78 percent of the people sampled, and we tried to sample American Spanish-speaking groups and blacks, said: "Yes, I have a physician," and: "Yes, I can tell you his name." The other data comes from a study not done of patients, but done of doctors. This was a study done by a group at the University of Southern California, who sampled what 10,000 doctors in 24 specialties do. About 400,000 patients.

In essence, they were asked are you the principal care physician who takes care of this particular patient for most of their problems. By our calculations, 62 percent of Americans were handled by that group.

So in terms of the kind of problem you are struggling with, if you take the two sources of data: (1) what is a patient's perception, does he have a personal physician; (2) what doctors say: "Yes, I do take full responsibility for that patient," as you can see, somewhere between 78 and 62 percent of Americans had that kind of a liaison.

If you turn it the other way, somewhere between 46 million and 79 million Americans in 1976 said: "No, I do not have a personal physician." I do not mean necessarily a source of care, but a personal physician. That is aggregate data.

Here is where I simply want to address the point you were bearing in on earlier. There is, I think, fair evidence to suggest that there are some groups, the group we are now calling structural underserved, that lag behind despite the increasing numbers of doctors. Though I am not an expert on the National Health Service Corps, as indicated, a number of our programs in tough inner cities or remote rural areas have made use of these individuals, and at least we are acquainted with some of their efforts.

If we take the 46 million Americans, more than half say they have trouble getting a doctor, and while worrisome, the trouble is not critical. It takes them too long to get there. They have to wait too long. They cannot pay the bill. But somewhere between 12 and 15 million Americans, it looks like there are real problems. There are barriers to care that are not ours, they are more complex and tougher. They are geographically isolated because they live in blighted inner cities or rural areas. They are culturally isolated, do not speak the language, are Spanish speaking, or in institutions where they are isolated from the mainstream of American life.

Our guess, and it is a responsible guess, is that this group includes between 12 and 14 million Americans nowadays.

Let me just point to why I say I think that even though we have increasing numbers of physicians, those are the groups that need your special attention, and at the moment the National Health Service Corps is one way of getting at it.

This is data which you already have, and we will submit a few articles for the record. But on the basis of those surveys I have mentioned, and I think these have come to your attention, we have tried taking that data from physicians, what we know about the population, how it will grow, and the output of new physicians to make projections, which have suggested to us what I have already said. We have plenty of doctors to do the job.

We are projecting 85 percent of physicians can make the kind of liaison I have described by 1985, and as many as 94 percent by 1990, which you were focusing on.

Let me show you the structural underserved group which worries us about simply stopping with that data. This is simply to show that some of those groups that I mentioned continue to have a tough time.

I would call your attention to the top line, which is quite similar to your first chart, which is the rising number of physicians per population.

Now, you have to reverse your thinking in the middle of the chart which shows who is left without a physician. When you disaggregate that data, when you begin to focus down on simply blacks, it looks as though it has moved from 28 percent without a physician to 38 percent without that kind of liaison I mentioned in 1976. You can see the trend line for the rural residents, which is why——

Senator SCHWEIKER. That seems to contradict the other chart.

Dr. ROGERS. It shows the hazards of simply aggregate data, Senator. Bear in mind, our black population is 11 percent. If you lump them in with the remaining 89 percent, everything is going up. But if you peel that group off by itself, you begin to get some other kinds of——

Senator SCHWEIKER. Does that mean they still visit an outpatient center?

Dr. ROGERS. Absolutely. And I will show you that in the next chart.

Why do we not just move to the next one? I am simply going to show you data, because it is the only data we can find which is on the cities. One is Charleston, S.C.; and one is Boston, which tries to begin to deal with the problem, where did inner-city residents go for care in 1969, and where did they get their care in 1975.

First: I would point to the second bar, which is the private physician group. As you can see, somewhat less use a private physician as a major source of care than obtained in 1969. You can see where the big jump has been. It is the community health center, which is translated into neighborhood health center, and many of those are the areas in which the National Health Service Corps people work.

Let us assume the Boston data. You can see it has pulled it away—to go back to the other chart puzzling you, Senator, those people are getting care, but it is in a clinic setting, not a private physician's office.

Senator SCHWEIKER. Is that good or bad?

Dr. ROGERS. I believe that is for you to decide. It certainly is vastly better than nothing. And, incidentally, in many of those effectively run outpatient units, or community health centers, I am sure a number of those people say: "Yes, I have a doctor, and I can tell you his name." Those are doctors who actually practice in those community clinics. So it is a major advance in terms of getting people to care. It does not indicate that the private system can handle all the problems in our complex 220 million people country.

Senator SCHWEIKER. If you are going to a group practice, and meet different doctors, it would be hard to name your doctor.

Dr. ROGERS. In a number of them, that is true. It depends on the philosophy or management of the HMO.

I want to call your attention to Boston, because it is a good example of the problem. The chart really shows you almost exactly what I showed you for Charleston, S.C., that despite the increasing number of doctors, people getting care from the private sector are not increasing, they are getting their care from community health centers, they are getting their care from hospital outpatient departments.

The reason I put this before you, and it seems it is what requires the careful thought of this committee can be shown on the last chart. If it looks especially like your first chart, it is, because it is the same chart. It shows the projected increase in number of physicians per 100,000 population.

I want you to recall that Boston chart, or that Charleston one, because here I think I can punch home the point that simply numbers of physcians does not necessarily guarantee access for the structurally underserved group.

In this year the number of physicians per population in Boston comes way up off the chart. It is 606. It is threefold, what we now have, and still that problem that I showed you, only 15 percent of people actually get their care from private physicians.

The same in Charleston. Almost double the kind of physician ratios to population. So those really are my two points. I would simply make one other, that at the moment I think there might be multiple ways to address that problem.

You suggested reimbursement as one of them, which I would agree is very important to look at. At this moment in our history the National Health Service Corps represents our one major national effort to deal with the structurally underserved populations. And I would simply hope that very careful thought was given to them before abandoning a system which seems to be beginning to work. But I will leave it to others who have more expertise to determine on that.

My last comment, I think these kinds of studies, and the sort of studies you showed us are of enormous importance. They cost a lot of money. The two we funded cost us $2.9 million, and it cost the Federal sector about $1.8. About $5 million to make those three or four charts.

Yet I am terribly distressed to see the funding for that kind of study is vanishing from the Federal sector. So I hope that problem gets addressed, too.

And I thank you for listening to me, and I and my colleagues would be glad to answer any questions that you have got.

Senator SCHWEIKER. Thank you.

Now we will hear from Dr. Williams, before we go to questions.

Dr. **Williams**. Thank you, Senator.

We appreciate the opportunity to describe our analysis of the changing distribution of physicians in nonmetropolitan areas. My colleagues in this study are Drs. William Schwartz, Joseph Newhouse, and Bruce Bennett. This research is funded by a combination of Government and foundation grants and by Rand corporate research funds.

I shall talk briefly about some empirical work that we have completed and other work that is in progress, and I will offer some interpretations of our findings. This work deals generally with access to specialty and primary care in nonmetropolitan areas, but it does not focus specifically on the National Health Service Corps' objectives or functions. It does not deal with access to care in metropolitan areas in any manner that is relevant to corps' activities.

We have recently completed a study of the changing distribution of board-certified physicians in the towns and cities of 23 States. The results of that study will appear as an article in the New England Journal of Medicine on October 30, 1980. The 23 States from four regional clusters contain about 43 percent of the country's nonmetropolitan population and include all of the States except Alaska with very unfavorable physician-to-population ratios. We have examined location data on diplomates of eight specialty boards for 1960, 1970, and 1977. The specialties include the five largest—internal medicine, surgery, pediatrics, obstetrics/gynecology, and radiology—and three smaller specialties—urology, dermatology, and neurosurgery. We also include data on family practitioners for 1977, the only one of the three years for which they were available.

We find that the percentage of towns with board-certified specialists has grown quite dramatically over the period of our study. For example, diplomates of the five largest specialties were present in 82 to 98 percent of the towns in the 20,000-to-30,000 population range by 1977. Surgeons and radiologists appeared in many smaller communities. About two-thirds of the communities in the 10,000-to-20,000 range had one or both by 1977. Nearly two-fifths of the towns in the 5,000-to-10,000 range had a surgeon.

Specialties providing secondary and tertiary care have also appeared in smaller and smaller communities. For example, about 40 percent of the communities in the 10,000-to-20,000 range had a dermatologist in 1977, whereas that number was about 10 percent in 1960. As one might expect from their numbers, the urologists have dispersed somewhat more than dermatologists, and the neurosurgeons are the least widely dispersed of all the specialists we studied. Not surprisingly, we found that family physicians were the most widely dispersed specialty. By 1977, board-certified family practitioners appeared in three-eighths of the towns in the 2,500-to-5,000 range, and over half the towns of 5,000 to 10,000.

The facts in our analysis are fairly straightforward though surprising to many. How we account for these facts is more at issue. We use a very simple—and to us plausible—framework to assess the factors responsible for physician distribution patterns. We assume that a specialist chooses his practice location in a manner that best satisfies his preferences for income, on the one hand, and professional and environmental attributes, on the other. Physicians choose to practice in communities where the demand for their services is high in order to achieve high income, and, if all communities were equally attractive, the workload of each physician would roughly balance out. Obviously, not all communities are equally attractive. Therefore, some physicians will accept lower workloads in order to live in communities that are especially attractive, and such communities will always be somewhat better served.

This simple framework, which applies to any other profession as well as to physicians, is useful for analyzing physician location at any point in time as well as predicting how location patterns will change over time as various factors influence incomes and the attractiveness of different communities. The key variables that merit consideration are: (*a*) the number of physicians, (*b*) the professional and environmental attributes of various sizes and types of communities, and (*c*) the geographic distribution of demand for care.

Of course, it is common knowledge—and we have seen two charts that show this—that the total numbers of physicians in the United States increased very sharply during the period of our study, and that is also true of each of the specialties we studied. This increase in supply means that the size of market areas—that is, the average patient load of each specialist—shrank. If the profile of physician location preferences remained constant and changes in the demand for services were the same everywhere, then our framework would suggest that physicians of a particular specialty would locate in some towns that were previously too small to attract them. Of course, additional specialists would also locate in previously served cities because market areas shrink everywhere. However, we would expect that the proportional increase in total numbers of each class of specialists to be greater in population size ranges where not all communities had a specialist. That is exactly what we find in our analysis. The proportional increase in number of specialists was significantly greater, the greater the percent of unserved towns in a given town size interval in 1960.

Physician supply clearly grew during the 1960-77 period, but what about the other two key variables in our framework—preferences for locations and the geographic distribution of demand? If metropolitan areas became less attractive and small towns more attractive places to live, then we would also expect changes in physician distribution similar to what we observe. Whether or not nonmetropolitan areas have become relatively more attractive places to live over time is not clear, but the evidence from a study by the GAO gives no indication that physicians' preferences for rural living have changed.

If demand for care rose relatively more in nonmetropolitan areas than in metropolitan areas, practice in small towns would yield a higher financial return and would hence become more attractive. In fact, examination of major determinants of demand for care such as age, sex, and insurance status does not suggest appreciable changes in the geographic distribution of demand per person during the period of our study.

In short, we find that there has been a dramatic movement of board-certified specialists into towns that were previously unserved by such specialists. Our analysis indicates that the overall growth in physician supply could account for this outward movement of specialists. However, we cannot exclude the possibility that changes in the preference for small town living or changes in the geographic distribution of demand for care played an appreciable role in shaping location decisions, although we find no evidence of substantial changes in either of these factors.

If our analysis is correct and the increase in physician supply played the dominant role in determining physician distribution, then it has important implications for the future. Physician supply is projected to increase about 30 percent in the 1977–85 period, and nearly all of these new physicians will be board-certified. This will add substantially to the ranks of specialists everywhere, but we can expect the percentage increase in nonmetropolitan areas to exceed the increase in each specialty nationally.

In closing, I want to emphasize that the study I outlined shows that many new towns are acquiring specialists, but it does not answer other important questions. In particular, it does not show where the newly served towns are located relative to other towns or rural areas that have no specialists. We are currently analyzing data on the geographic location of specialists and the population as a whole to determine the effect of physician diffusion on the travel distance to specialty care. Preliminary results show very significant reductions in the travel distance to the nearest specialists. To see if physicians in small towns have inordinately large patient loads, we are also comparing physician-to-population ratios across cities and towns where people appear most likely to go for care. That analysis is in a very early stage, but we think it will reveal important information for health manpower policymaking. Specifically, we think the results of these analyses will show that physicians respond to market forces to a greater extent than many have argued and that the increase in physician supply is substantially improving access to care in nonmetropolitan areas.

Thank you.

Senator SCHWEIKER. Thank you, Dr. Williams.

Since you just testified, I guess we will start the questions to you first.

I realize that your studies are soon to be published in the New England Journal of Medicine, and you are under some constraints. I appreciate your willingness to be here under that situation.

I would like to ask you, though, if I may, what significant breakdown can you give us in terms of the growth of the primary care specialties in these rural areas? Can you give us some definitive idea of what that picture is?

I think it is one thing to say all the specialties improved, but the real question is did the primary care specialties show significant growth?

Dr. WILLIAMS. There was significant growth in internal medicine, pediatrics, obstetrics, and gynecology, the last of which is sometimes in and sometimes out of the definition.

As I indicated, the data on family practitioners are really only for 1977, and that is somewhat problematic to interpret, because the numbers of people who were providing care as general practitioners before they became board-certified family practitioners. In internal medicine, obstetrics, gynecology, and pediatrics, there is substantial growth in the 1960–77 period.

I want to emphasize again that we are looking at board-certified physicians, so the increase is in numbers of board-certified physicians.

Senator Schweiker. Now, in anticipating your testimony, Dr. Davis made some comments about your work, and in fairness we should give you an opportunity to respond. So would you respond to some of the differing opinions about your studies?

Dr. Williams. As I indicated, the facts are not much at issue; the interpretations are somewhat more so. She made three points, as I understand them.

First is one we concede, which is we have not looked at the character of the new areas that are being served. What we know is new areas are being served. So things are improving.

What is the character of the new cities, or new towns and cities that get physicians, we have yet to look at. We are in the process, as I indicated, of looking to the distance of the population in our sample States to the nearest specialists. Although that is in an early stage, it is clear that there has been a substantial improvement in the distance to specialty care. So that is one point.

As regards the towns of less than 2,500, that is also true. And, quite frankly, there is a data limitation. We found it difficult to interpret data on the populations of towns less than 2,500, because of the way the census data are reported, and we expected such towns to have very few specialists other than family practitioners.

However, our new analysis that looks at the distance to the nearest physician gets away from that problem, because we have the census of the United States in a 5- by 5-mile grid. So we will take a count of all the people who are out there. We just cannot associate them with cities or towns because of the way the census information is reported.

Finally, with regard to physician-to-population ratios in the nonmetropolitan areas, as opposed to growth in the metropolitan areas, it is true that the absolute numbers of physicians increase more in metropolitan areas than nonmetropolitan. The proportional increase is greater, however, in nonmetropolitan areas.

That is not surprising to us, because we expect a lot of border crossing. A lot of people go to the city because that is the nearest place for care. They may live in an area right outside the metropolitan area, and may go to the city because it is nearer than any small town.

The other reason is the city is an efficient place to produce care, say, by neurosurgeons. Neurosurgeons and other specialists serving a relatively large population base would never be expected to locate in a small town. So we expect a lot of border crossing, and we think that is desirable for medical reasons.

Senator Schweiker. Are there communities which are too small to economically support physicians?

Dr. Williams. I think so.

Senator Schweiker. Do you have an idea at what size that occurs in terms of population?

Dr. **Williams**. No; I do not. But it certainly varies by specialty. You would expect family practitioners to be out in the smallest communities, and indeed they are.

Senator **Schweiker**. Does the increasing number of National Health Service Corps physicians reduce the incentive to private practitioners to move into previously underserved areas?

Dr. **Williams**. I think it depends on where the Corps is located. In our particular study, we found that in 1977, in our areas, there were very few Corps members that we could identify.

In part, that is because we focused on board-certified physicians, and many of the Corps members are not yet board certified.

Again, in our followup study to the distance to the nearest physician of a particular type, we are abandoning the board-certification restriction, and looking at specialists, according to what they say they are.

Senator **Schweiker**. Thank you very much, Dr. Williams. I appreciate your participation today. I am going to ask Dr. Rogers a few questions.

Dr. Rogers, you cited Boston as a case study for inner-city residents for medical care, and particularly of how much is obtained from private practice, and how much from a community health center or hospital outpatient department.

Of course, when we get to a hospital or outpatient clinic, is there probably some kind of private practice involved. Is Boston a special case? It has three medical schools and numerous teaching hospitals that would account for the high number of doctors.

In addition, there are many programs funded by both the Federal Government and your foundation, that encourage the use of the hospital outpatient departments.

Does that not skew the result about private practice when you have that kind of medical community?

Dr. **Rogers**. I think modestly, yes. As I indicated, perhaps it is better to turn to the Charleston data, which is not as wealthy in teaching resources. Those happen to be the only two cities on which any such data is available.

The point is, even if you look at Charleston, they now have 400 physicians per whatever population group we are talking about, where your charts and ours are projecting that we will have 245 per 100,000 by 1990.

I wanted to indicate, let us be cautious that additional numbers immediately translate into everyone having a personal physician in the private practice sector. I am just worried about the trend for the low income and the minority groups, even where the numbers of doctors are rising. That is the reason for this "structurally underserved" term we have suggested.

Senator **Schweiker**. In other words, as one of your charts shows, the nonwhite population and the poor population are getting more services now than the white and nonpoor populations?

Dr. **Rogers**. Right.

Senator **Schweiker**. Where the poor population is seeing the doctor more often than the nonpoor population is it really a material fact whether they are seeing a personal physician or going to an outpatient clinic, or going to an emergency room? Is that really significant any more?

Dr. **Rogers**. I think that is debatable. I think there is some evidence, certainly from the University of Chicago study, which suggests that you do somewhat better if you have a physician who knows you, and vice versa. There is some rather interesting data that suggests if you use a clinic or hospital outpatient department, if you use that often enough, for a set of medical needs, and the answer is "No." But one can argue how far you go with the system.

Senator **Schweiker**. A lot of it is practicality. We have five kids. They get sick, or have an accident over the weekend, or evening, and there is no way I can see any private physician. So they go to the outpatient clinic or the hospital.

In fact, these are the only places which serve me at those hours.

Dr. **Rogers**. I could not argue that point. Coupled with the fact that we are putting a large investment in trying to help outpatient departments and emergency rooms, and they become effective because that is a way of life.

Dr. **Blendon**. The way the survey was done, I do not believe you or your family would have fallen in the group. People were asked, for most of the times you are sick do you have a specific doctor. Most of the people who come in on an ad hoc emergency on a Saturday night or weekend, name a doctor, and would not have fallen in that category. Those who say there is nobody except the Hopkins, or whatever it is down the street, they fall in a special category. And we believe these people are institutionally dependent. They get all their care from a series of clinics.

And the studies from Chicago show that if you do not have a regular guy, sometime in your life you really do have a serious problem about the management of critical problems when you get them. People with no sources of care went over 40 percent less for conditions than a panel of 100 physicians from the University of Chicago thought should have been seen by a physician. And the only discriminating variable was whether or not they could identify that personal source of care.

Having that regular doctor was more likely to have you resolve that problem when you got it, than being someone dependent on a series of institutions.

It looks like what the neighborhood health centers do, and the institutions, there is a pool of people who shift between the two of them, but they do not get into the private practice community, irrespective of the number of doctors in Boston.

Senator **Schweiker**. Let us get back to the outpatient or emergency room. Are they not private practitioners in there?

Dr. **Blendon**. Most of the physicians are interns, and hospital staff, or medical school faculty. You may want to define medical school faculty as private sector, but the majority are in the third sector. To quote something from John Gardner, they do not view themselves as private physicians in private practice, but institution related. Often heavily engaged in research and education.

So with the exception of a number of hospitals which would not have shown up in this data, moving to full time groups, most of these people are responsible for what I believe you would call a private physician.

Senator **Schweiker**. Why do we fund primary care and outpatient clinics if it has no impact on service?

Dr. **Rogers**. It has enormous service. No question about that. Some of the data are increasingly impressive in that regard.

I think the difficulty arises from the fact that it looks as though we have some groups, some geographic areas where it is very difficult for the private practice of medicine to sustain itself. It is in those areas where the different experiments with ways of giving care are going on, and they have vastly improved the situation.

I think the debate now becomes is that the system, do you want a two-class system of care, where I received mine from a personal physician, and someone less fortunate receives it from a community health center?

Senator **Schweiker**. Things are changing so rapidly I am not sure this is quite as relevant as it once was. You can go to a lot of new hospital communities where they put their outpatient clinic right next to the hospital, and where the doctors have offices. That completely blurs the distinction we are making here, and acts as a new trend. I am not sure that lowers the quality in any way.

It is non-Federal practice, nonpublic practice in terms of Federal support.

Dr. **Rogers**. No argument, except to point out I do not believe it would be blurred in the data we are suggesting, because the question was do you have a personal physician.

Senator **Schweiker**. I am not sure that is relevant any more. I can go to the outpatient clinic next to the hospital and get 16 doctors to see me. How relevant is that question any more? That is the way the richer areas are going, not just the poor.

A lot of new hospitals, the richer ones, are doing the same thing as in the poor areas. Is that bad?

Dr. **Rogers**. I will not argue that. As an academician, as a practicing academician in an academic setting for 30 years, that is precisely the way I practiced. So I did not find that a bad way of taking care of people.

Senator **Schweiker**. Let me say, Dr. Rogers, we appreciate your participation here. You have certainly done an outstanding job with your foundation. I know this committee, and many members of it, have been recipients of your fellows. They have done an excellent job. We look to you as a leader, not only in this creative thinking and study area, but in terms of bringing bright students into the professional group. So we are indebted to your foundation for the work you have done in this area, and we appreciate it.

Dr. **Rogers**. Thank you very much, Senator. That is music to my ears.

[The prepared statement of Dr. Rogers and additional material supplied for the record follow:]

Statement by David E. Rogers, M.D.

Prepared for presentation to
Subcommittee on Health and Scientific Research,
Committee on Labor and Human Resources,
U.S. Senate

September 24, 1980

Mr. Chairman, my name is David E. Rogers. I am pleased to appear before you and this committee once again. I am a physician, a former professor and chairman of medicine at Vanderbilt University, and former dean of the medical faculty and vice president for medical affairs at The Johns Hopkins University. For the past eight years I have served as president of The Robert Wood Johnson Foundation. Although I am testifying today as a private individual, I will draw heavily upon my experience in these professional roles.

In 1972, The Robert Wood Johnson Foundation chose as one of its principal objectives to assist groups and institutions that would try to improve people's access to general medical services--primary care, as it has been termed.

A number of the programs The Robert Wood Johnson Foundation has funded--in rural and inner cities alike--have depended on National Health Service Corps doctors, dentists, nurses and new health practitioners. National Health Service Corps providers, for example, have worked in a number of our largest, multi-site programs. In one such program serving inner-city people in five metropolitan areas across the country, our grantees hope to get authorization for 20 additional Corps physicians over the next 18 months. Thus, while I am not an expert witness on the Corps itself, I know the importance of some of its work.

What I will offer you today is some information about Americans' access to primary care services that I hope will be relevant to your deliberations about the Corps.

I will give evidence which indicates that significant gains have been made in improving the American people's access to care over the past ten years. The large increases in the numbers of doctors and public financing of medical care service have been the major reasons for these gains. However, I will also present data which suggests that substantial numbers of Americans--whom my colleague, Dr. Robert Blendon, has characterized as the "structurally underserved" continue to have problems. In many ways these individuals resemble the "structurally unemployed" who are unable to find work no matter how many job openings there are. These Americans, because of geographic, cultural, and other barriers have trouble getting mainstream personal medical care. Simply increasing the numbers of doctors in America has not been enough. For the structurally underserved, it takes something like the National Health Service Corps that can reach out and share with them the benefits of modern medicine.

My presentation draws on the findings of four research studies. Two were funded or conducted by the Department of Health and Human Services. The other two, initiated by The Robert Wood Johnson Foundation, also received federal assistance.

The two federally financed studies are the National Health Interview Survey conducted in 1978 by the National Center for Health Statistics, and an earlier survey, also by the Center, in 1975.

The third study was directed by Ronald Andersen and Lu Ann Aday at the University of Chicago. Designed to measure people's access to medical care, it is based on a 1976 survey of 7,787 individuals in 5,432 randomly selected households across the country.

The fourth study was conducted between 1973 and 1976 by a team at the University of Southern California (USC) under the direction of Robert C. Mendenhall. In this study, 10,000 physicians in 24 specialties kept log-diaries on all their activities over three-day periods. Among the results is a wealth of data telling us what doctors did in 400,000 patien encounters in hospitals, in the doctors' offices and by telephone.

With your permission, Mr. Chairman, I would like to submit for th record three major reports drawing on the results of the National Health Interview Survey and the University of Chicago and the University of Southern California studies.

Much of what my colleagues and I have written in the past few yea has focused on the good news of those research studies. The first study-by the National Center for Health Statistics--clearly shows that the num of physician visits per person per year has risen dramatically in this country. As shown in Charts 1 and 2, this is particularly true for blac and people with low incomes--both groups with heavy burdens of illness w historically have been poorly served medically. We have not been as successful in improving the care for rural Americans (Chart 3).

However, simply counting the number of visits people make to doctors each year is not sufficient. The term "physician visit" can mea many things. It can be a hurried visit to a "Medicaid mill" in which a patient is ping-ponged among a series of doctors, nurses and others to maximize reimbursement income. It can be hours spent waiting in a crowd noisy hospital outpatient clinic for a few minutes with a doctor you've never seen before. At the other end of the scale--and far more desirabl personally and medically—is the kind of visit you and I are accustomed to: seeing a doctor we know by name and who knows us and our families. Implicit in this relationship is the physician's assumption of personal responsibility for attending to an individual's medical care needs.

The value of this kind of professional relationship between a patient and a specific physician is borne out in the University of Chicago study. Included in this study was the collection of information about people's recent illnesses and where they got their care. Using this information, Andersen and Aday found that people who get their care in a clinic, or from several physicians, see a doctor 18 percent less frequently than objective medical opinion indicates they should. People who have no regular source of care see doctors 42 percent less frequently than experienced physicians feel is necessary.

The importance of these finer details in what access to care means in human terms is what prompted the Foundation to initiate the University of Chicago and the University of Southern California studies.

As Chart 4 shows, the University of Chicago study found that 78 percent of Americans in 1976 had a personal physician whom they could identify by name. At the same time, the University of Southern California survey of physicians indicated that physicians view themselves as principal providers for 62 percent of Americans. Thus the number of Americans who do not have a personal physician meeting their primary care needs is somewhere between these two figures. This translates into somewhere between 46 million and 79 million people.

The difference in apparent shortfall between the two studies is not as great as it may seem. The "78 percent" reflects people's perceptions of what they have available to them. On the other hand, the "62 percent" reflects an actual use of services from the doctors' point of view. In addition, this projection was made early in the analysis, and was based on data that did not include some of the more hospital-based specialties and subspecialties. Thus, the two studies are mutually quite supportive.

We then coupled the results of the University of Southern California study with data on projected population growth and the output of doctors from U.S. medical schools. This has enabled us to estimate the capacity of the country's increasing supply of physicians to meet the primary care needs of the American people over the next decade (Chart 5). Because increasing numbers of doctors will enter practice in this period, the projections suggest that principal providers will be available for 85 percent of the population by 1985 and 94 percent by 1990.

However, we have other evidence that adding more physicians has not necessarily and may not in the future translate into better access to care for certain Americans. Let me take you back to the University of Chicago study and the 46 million people who said they were without a personal physician in 1976. For somewhat over one-half of these people, trouble finding a doctor was worrisome but not critical. They had to wait too long for an appointment, they had to travel too far, or they had problems paying the bill.

Of more importance to you, within this group there is a core of between 12 and 15 million individuals for whom the access problem is far tougher and more complex. Their access problems stem from a different set of reasons than those which confront most of us. These people face a series of non-health-related barriers which prevent them from getting to or receiving adequate care.

First, a number of them live in extreme geographic isolation, far from sources of care. Some reside in the backwaters of rural America or in seriously blighted inner-city areas. Poor public transportation, high crime rates, and lack of many basic public services all interrelate to create special problems of access to medical care for these people.

Second, for some, these problems are often coupled with the difficulties of cultural isolation. They do not speak English or they do not feel comfortable in traditional mainstream American medicine. These include certain groups of native Americans, Mexican emigrants and other Spanish-heritage peoples.

Third, despite Medicaid, poverty remains a barrier. Eligibility income levels have not been changed in most states in years, and with the rampant inflation we are experiencing, there has been a 25 percent decrease in the number of low-income people covered by public programs.

Fourth and finally, certain people remain outside the mainstream of medical care because they either move around frequently--including migrant laborers--or they reside in isolation from the rest of American life. These latter people, who were not surveyed in the University of Chicago study, are the 2.3 million Americans who live in institutions. Many studies have documented the inadequate provision of primary care services for people in homes for aged, mental institutions, correctional facilities, and other institutions.

These 12 to 15 million Americans I have been describing constitute what I earlier termed the "structurally underserved." I say this because these people in the past have been unable to get a personal physician despite increases in the number of doctors practicing in America.

Let's look at the evidence. Chart 6 shows that despite the increasing number of doctors, between 1963 and 1976, little or no improvement was made in the number of blacks, or people with low-incomes, or rural residents who had a personal physician. A trend line is not available for Mexican-Americans in the Southwest, but spot data show that they too are among the structurally underserved groups.

A similar pattern can be seen in the inner-cities of America. A Charleston, South Carolina study, for example, shows that inner-city residents receiving their care from private physicians decreased 29 percent between 1969 and 1975. This despite the fact that the number of physicians per 100,000 people increased by 10 percent during this same period (Chart 7).

Boston presents an even more interesting case. Here, between 1971 and 1975, the percentage of inner-city residents (in the area studied) who had a personal physician declined 4 percent despite a 7 percent increase in the nationwide physician-to-population ratio (Chart 8).

What makes Boston so relevant to my thesis, however, is the physician-to-population ratio there. At this time there are 609 practicing doctors in Boston for each 100,000 residents--more than twice the ratio projected for country in 1990 (Chart 9).

This and other trends I have cited for the structurally underserved lead me to conclude that we have no solid basis for believing that the greatly increased number of physicians we will have in this country in 1990 will necessarily make personal physician care available for these special groups of Americans.

We are going to have to do something different than we have in the past if we want to provide access to a personal physician for:

- people with low incomes,
- the geographically isolated,
- the culturally isolated,
- and institutionalized Americans.

Medicare, Medicaid and graduating more and more doctors is simply not enough. The studies I have described make it appear probable that we will have adequate numbers of doctors to serve all Americans by 1990. But the other evidence I have cited suggests that we will also need special mechanisms and arrangements to ensure that a sufficient number of them practice in places and ways that will make them accessible to the structurally underserved.

I will leave to others to share with you whatever evidence there is regarding the potential of the National Health Service Corps to meet this need, but at present it represents the major national attempt to deal with this problem.

I would like to close with a final comment. The studies that produced the information cited in my testimony today were both time-consuming and costly. The University of Chicago and USC studies alone have received $2.9 million from The Robert Wood Johnson Foundation and another $1.8 million from the federal government. Offsetting such costs is the fact that information produced by health services research studies like these is essential for informed decisions on national health policy involving the expenditure of billions of dollars. Yet at present, federal funding for health services research is declining sharply. This trend will have to be checked and reversed if you and the others responsible for national health policy are to have the information you will need to make wise choices.

Mr. Chairman and members of the Subcommittee, thank you for this opportunity to share my thoughts with you today. I will be pleased to respond to any questions you may have.

PER PERSON PHYSICIAN VISITS: WHITE AND NON-WHITE
1964 – 1978

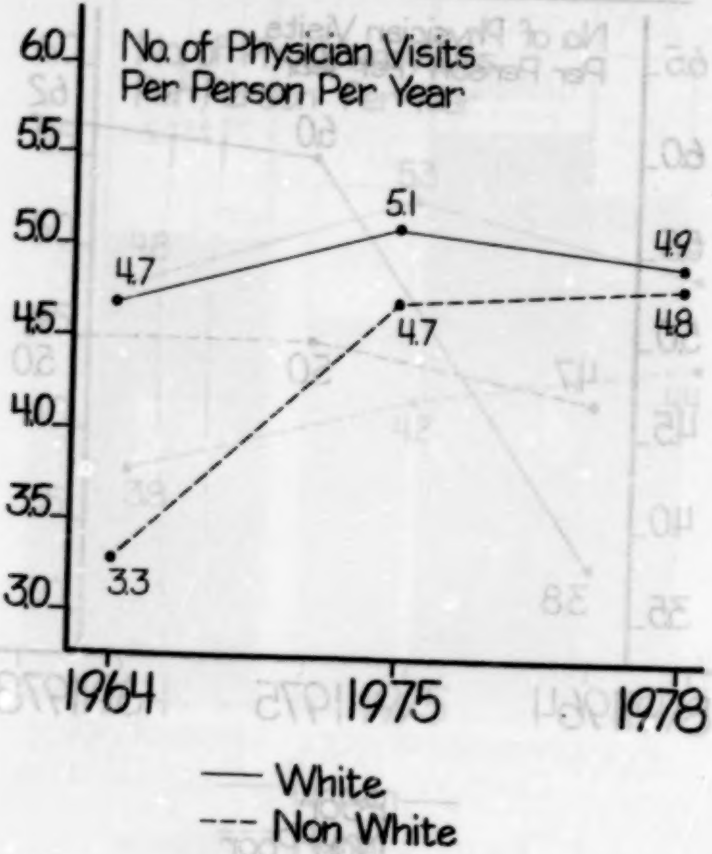


CHART 1

PER PERSON PHYSICIAN VISITS: POOR AND NON-POOR

1964 – 1978

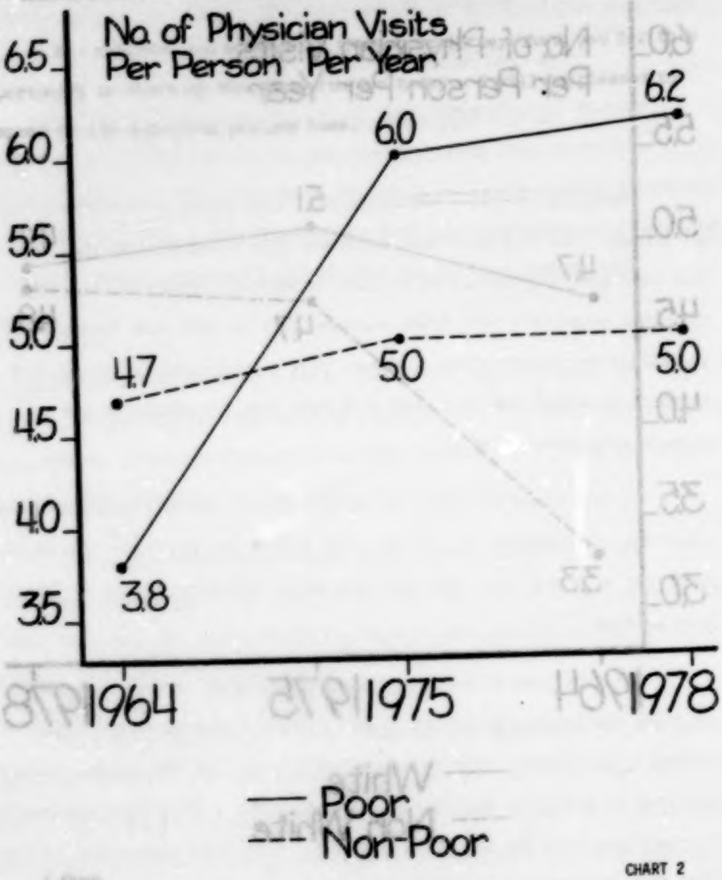


CHART 2

PER PERSON PHYSICIAN VISITS: URBAN AND RURAL RESIDENTS

1964 – 1978

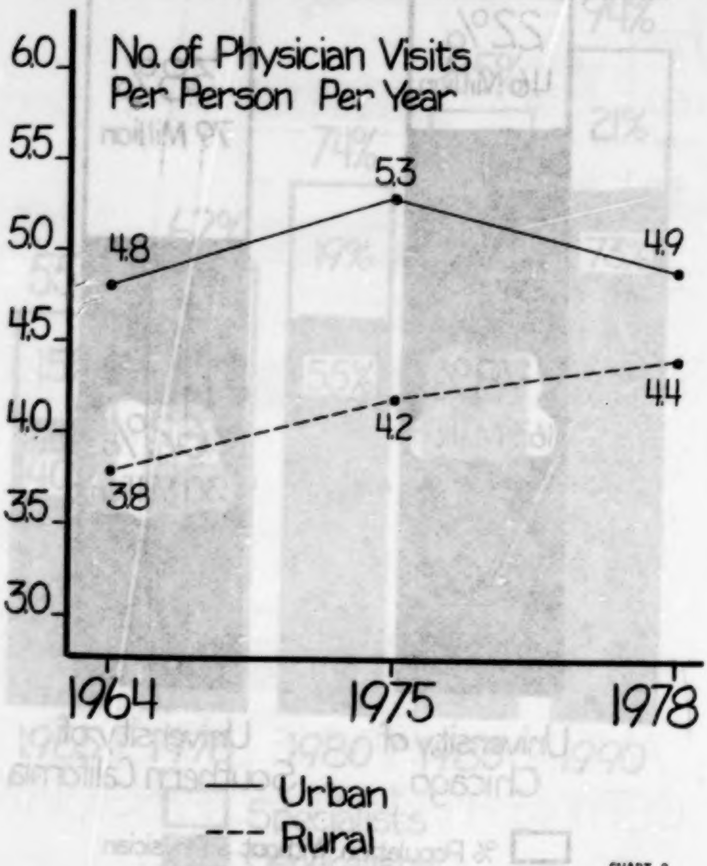


CHART 3

HOW MANY AMERICANS HAVE A PERSONAL PHYSICIAN?

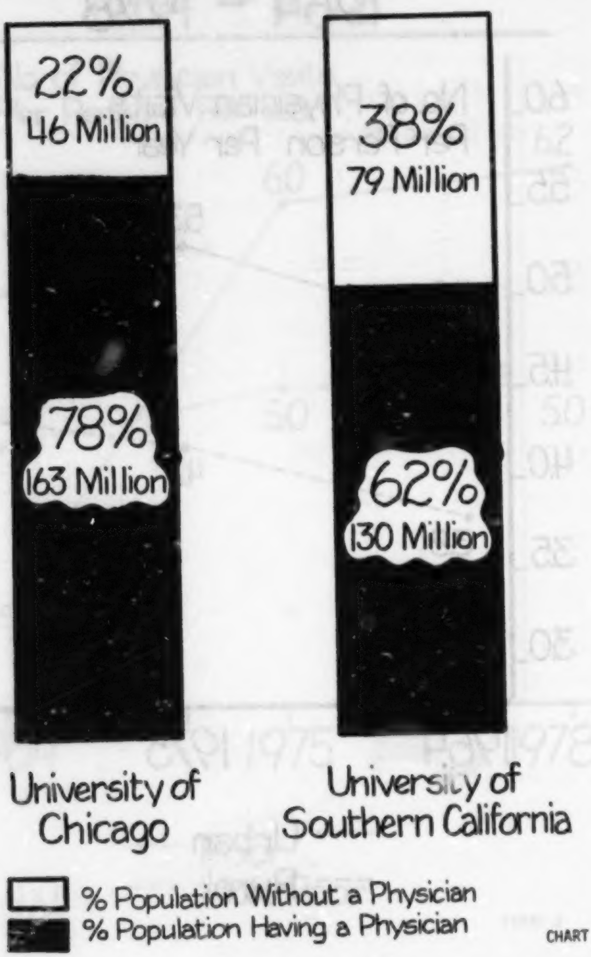


CHART 4

AVAILABILITY OF PHYSICIANS — PAST, PRESENT, AND PROJECTED

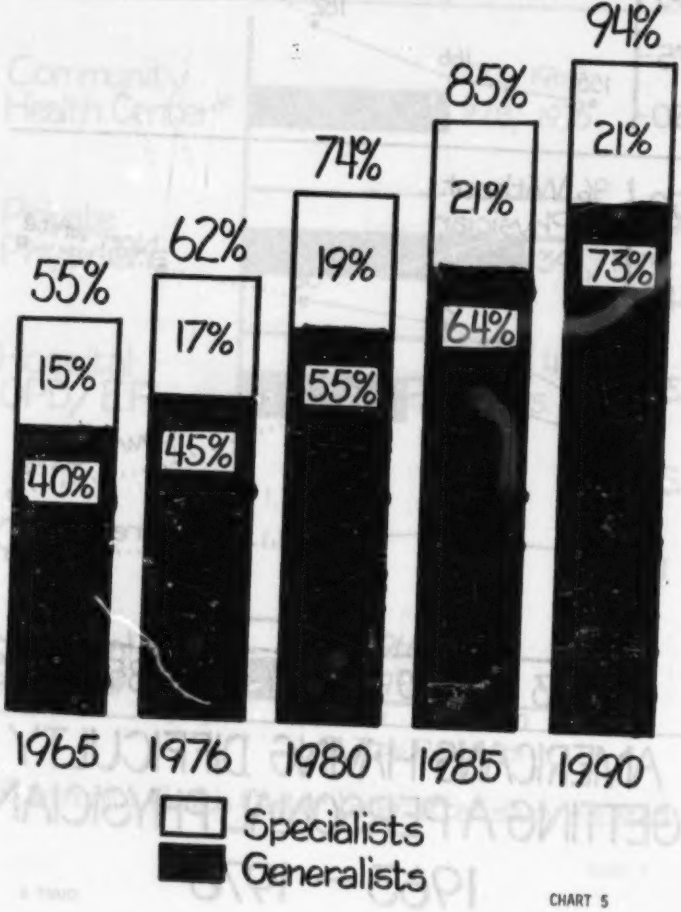
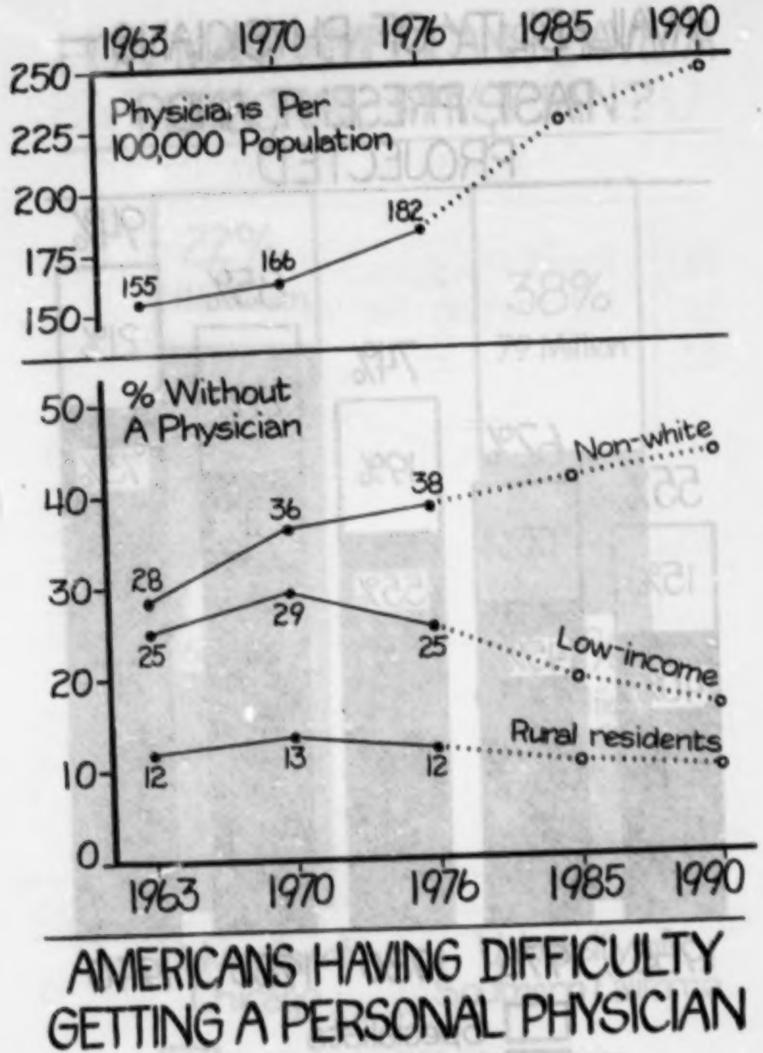


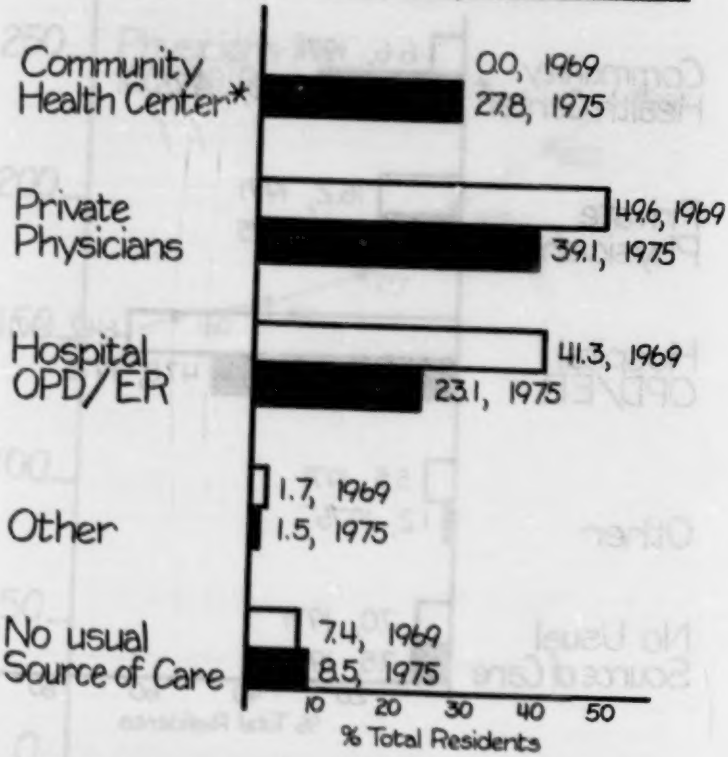
CHART 5



AMERICANS HAVING DIFFICULTY GETTING A PERSONAL PHYSICIAN 1963 – 1976

CHART 6

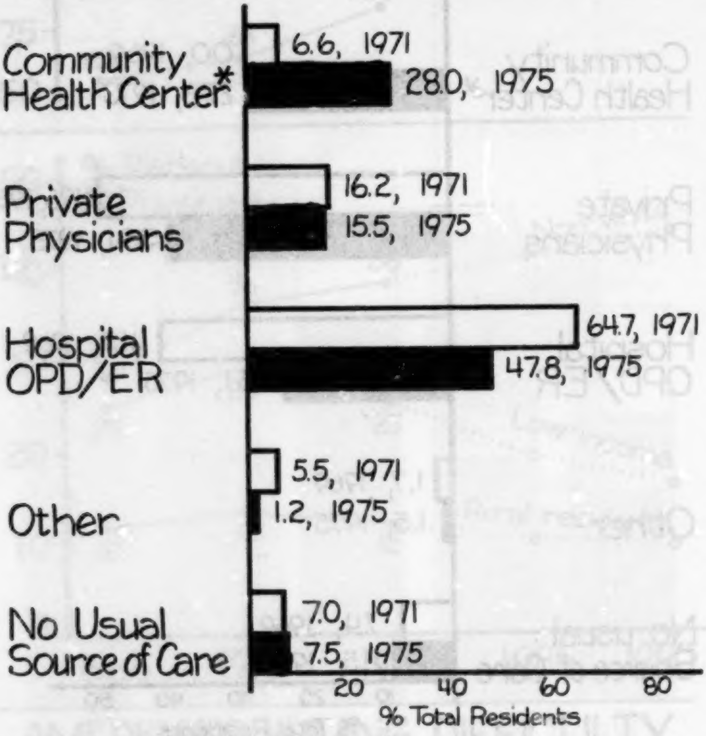
WHERE INNER-CITY RESIDENTS GO FOR MEDICAL CARE — CHARLESTON, S.C.



*Community Health Center began after study initiated

CHART 7

WHERE INNER-CITY RESIDENTS GO FOR MEDICAL CARE— BOSTON, MASS.



*Established in 1968

CHART 8

PROJECTED AND ACTUAL SUPPLY OF PHYSICIANS 1960 – 1990

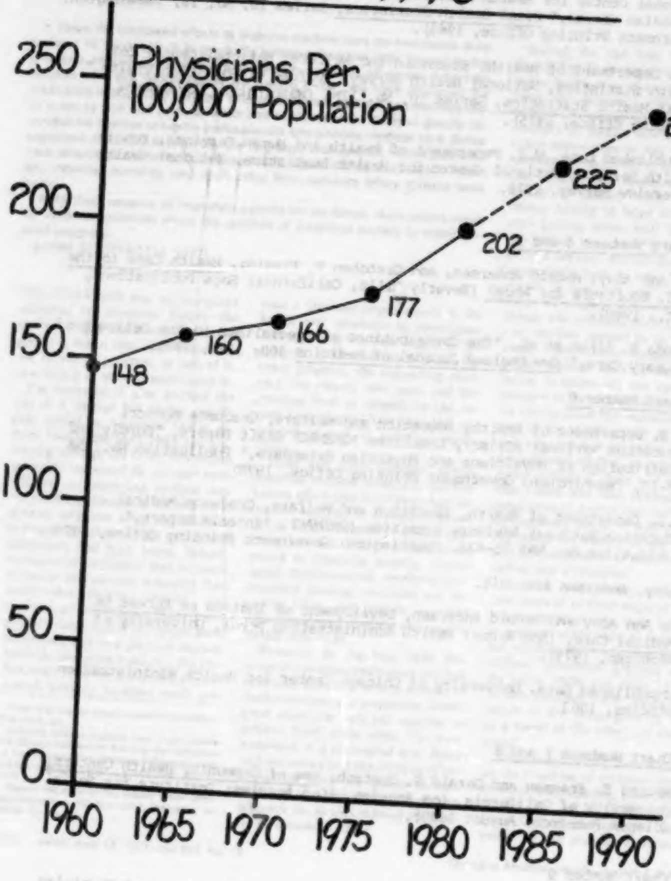


CHART 9

REFERENCE SOURCES FOR CHARTS

Chart Numbers 1,2, and 3

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Chart Number 6

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Chart Numbers 7 and 8

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Chart Number 9

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GMENAC, "Interim Report," loc. cit.

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The Changing American Health Scene

Sometimes Things Get Better

David E. Rogers, MD, Robert J. Blendon, ScD

• Since the increased efforts to improve medical care for Americans were initiated 15 years ago, it is generally believed they had little impact on the problems addressed. Review of national data suggests otherwise. American medical care and health status are getting better. We have improved the availability of physician services and largely eliminated the gap between visits made by rich and poor, or white and black citizens. We have greatly expanded the number of health professionals who provide medical care. Better organized programs to provide care to groups with special health problems have reduced both mortality and morbidity. Age-adjusted death rates, infant and maternal mortality, and death rates from coronary artery disease have fallen.

While there remains an important agenda for the future, there seems room for cautious optimism about the abilities of American society to make forward progress.

(*JAMA* 237:1710-1714, 1977)

THE YEAR 1976 was an important milestone in American history—the nation's 200th birthday. For many groups it was a time of introspection and review of progress, or lack of it, in a variety of areas of social concern.

For medicine it also marked the end of a shorter but highly significant period in American health affairs. During the early 1960s and continuing through the 1970s, this nation markedly increased its national commitment to improving medical care for all of its citizens. It was part of a general optimism about our abilities to better the shape of our world, and Americans had high hopes, indeed, considerable confidence, that we could create in this country a society that could offer dignity, quality, and equity to all our citizens. There was a growing sense that if the nation could consciously and in a planned manner make the resources available, the professionals from the public and private sectors working together could produce a dramatic improvement in the health care available to Americans. This optimism was encouraged by the nation's prior successes with the space program, the expanding economy, the victory over polio, and the growing level of respect for the superb technological base that had developed as part of American medicine.

These and other successes stimulated the national mood that planned human effort plus technology had the infinite capacity to produce a better life at what then seemed to be a relatively low cost. Thus, we were determined to eliminate poverty, abolish racial discrimination, eradicate substandard housing, revitalize our decaying cities, and provide equitable educational opportunities and quality health care to all.

However, by the late 1960s this sense of optimism had waned and had gradually begun to turn to a sense of disillusionment and pessimism. Doubt grew about our national capacity to achieve these social ends. We were enmeshed in a protracted war. Many had concerns about the abilities of our pluralistic American system to cope with any of a wide range of complex domestic issues that marred the quality of American life.[1,2]

Indeed, for the first time since World War II, national expenditures in the health area exceeded expenditures for defense[3,4] (Figure), and many were asking whether the vast amounts of monies directed toward either sector were in any way guaranteeing an improved or more secure life. Despite the enormous flow of money to health, there was the uneasy feeling at large that things were getting worse, and "the health care crisis" was much in the discussions of the day. Medical care seemed increasingly hard to come by for all people, be they rich, poor, or middle-class. Shortages of health professionals who rendered general medical care services seemed to be growing worse. Institutions—hospitals, academic medical centers, and public health facilities—did not appear responsive to the unmet needs, and horror stories about the unavailability of care or its crippling cost to individuals were much in the public eye. The conventional wisdom, as reflected by many writers of those and more recent times, was that increasing expenditures in medical care had not led to improved health,[5-11] and cynicism regarding the ability of our society and our institutions to better the situation was widespread.

So what is the reality today? Fifteen years after these major efforts to improve medical care were initiated, it appears worthwhile to pause and ask whether the continuing sense of national pessimism growing out of the latter 1960s and early 1970s is, in fact, justified. Have things grown better, or are things growing worse, as a result of the efforts of these 15 years?

The answer to this question, based on the broad use of national data and evidence accumulating from multiple studies, can be unequivocal—things have changed, and changed for the better. In our pluralistic, sometimes

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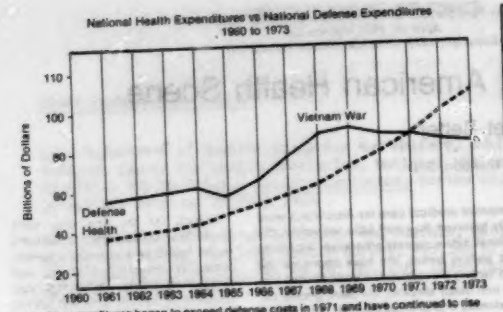
From The Robert Wood Johnson Foundation, Princeton, NJ.

Adapted from an address read in part before the Clinical Colloquium marking the dedication of the Scripps Clinic Medical Institutions' new medical-scientific center, La Jolla, Calif, Nov 11, 1976.

Reprint requests to The Robert Wood Johnson Foundation, PO Box 2316, Princeton, NJ 08540 (Dr Rogers).



Health expenditures began to exceed defense costs in 1971 and have continued to rise

Table 1.—Visits to a Physician by Income, 1931 to 1975

	No. of Visits		
Income Group	1931	1964	1975
Total	2.9	4.6	5.1
Low	2.2	4.3	6.0
High	4.3	5.1	4.9
Gap, %*	+49	+16	−22

*Percentage of visits by high income group compared to low income group.

groping American way, many groups, institutions, and individuals have participated in strengthening medical care services in this country. Indeed, in some sectors, remarkable improvements have taken place.

In this communication we will focus primarily on the improvements occurring in the provision of general medical care services to nonhospitalized patients, but some intriguing gains in the health of Americans that have received little attention will also be noted.

The data suggest that our American system, composed of many independent institutions and people going at problems in their own ways, does work, and perhaps better than we are sometimes wont to recognize.

Changes in Access to Medical Care

Is physician care still as difficult to come by as it was five years ago? The answer appears to be a qualified no. Data on the number of visits people make to doctors do not tell us all we wish to know. For example, they tell us nothing of what went on in the encounter. However, they do offer one narrow window on how medical services are deployed. Between 1969 and 1975, physician visits per person per year rose by 19%.[13] This suggests that physicians are more accessible. There are also indications that physician care is more available to those who need it most. Of principal concern in 1972 were the inequities in the availability of care for those who were poor or black or located in inner-city centers of poverty or isolated rural areas. These problems have been with us since at least the early 1930s.

As noted in Table 1, in 1931 people with low incomes saw physicians 49% less frequently than did those with high incomes.[13] This continued gap was of concern because of the abundant evidence that serious illness is more common among the poor.[14] By 1975, however, this inequity in the availability of physician services had been largely eliminated. Indeed, people of low income are now seeing physicians slightly more often than those of high income, averaging six visits per year compared with a national average of about five[13] (unpublished data from the 1976 Health Interview Survey, National Center for Health Statistics, US Department of Health, Education, and Welfare). This suggests that we have found ways of getting low-income people into the health system, and at levels of use that seem more commensurate with their larger number of health and medical problems. That these figures can be applied fairly broadly is also suggested by the sharp decrease in the number of Americans not seeing a physician during a particular year. In 1970, 32% of Americans filled this category, and by 1976 this number had dropped to 23% (R. Anderson, MD, and L. A. Aday, unpublished data, 1976).

These overall changes in those receiving physician attention were also paralleled by the improvement in the availability of physicians to minority groups. In 1970, black Americans saw physicians 12.5% less often than did white Americans. Again, by 1976 this gap had largely disappeared, and blacks, also a group with greater illness burdens, were seeing physicians as frequently as whites[6,12] (unpublished data from 1976 Health Interview Survey and from Anderson and Aday). Many of these improvements in patient care access have been assisted by the rapid growth of both private and public health insurance coverage. In the 15 years since 1960, the proportion of a patient's bill directly paid by him has been reduced by 40%, considerably easing the previously existing financial barrier to care.[5,15]

Gratifying though they are, these figures on physician use need to be interpreted with caution. Obviously, if one believes that better medical care can improve the health and welfare of Americans, getting to medical care is a necessary prerequisite for all that follows. But there is also evidence that some of these new physician visits are not all that we would hope them to be. The Medicaid mill scandals and the overcrowding of hospital emergency rooms are cases in point. We need much more solid evidence that a physician visit yields better medical care than those bare figures tell us. The point remains, however, that great efforts have been made to improve access to care, that change has occurred, and that the change seems to be in the proper direction.

Decreasing Shortages of Health Professionals

What of the crisis in the production of health professionals? In the early 1970s, much criticism was being leveled at academic institutions because of their failure to increase the number of young men and women being trained as doctors, dentists, nurses, and other health professionals. However, between 1970 and 1976, medical schools increased the number of physicians in training by 50%. In contrast to the 40,000 Americans in medical schools in 1970, almost 60,000 will be in training during 1976.[16-18] Of equal importance, residency opportunities for those interested in generalist careers are rapidly expanding, and American-trained physicians are filling them.[19-21] Nursing schools have also increased their enrollment by an impressive 52%, and there has been increasing emphasis on broadening and upgrading the clinical training of the nurse graduates to give them larger and more direct patient care responsibilities[16] (unpublished data from the Health Resources Administration, US Department of Health, Education, and Welfare, 1976). The number of dentists emerging yearly is almost 25% higher than in 1970,[16,22] and a number of dental schools are training their graduates to serve groups of people with special dental care needs, particularly the physically and mentally handicapped.

New kinds of health workers, notably physician assistants, are also entering the field in rapidly increasing numbers. In 1972, approximately 400 people were emerging from training institutions. By 1976 many additional institutions had established new educational programs for physician assistants, and 1,500 will enter health care careers this year (Association of Physician Assistant Programs, unpublished data, 1976).

All of these changes in health manpower suggest institutional responsiveness of a high order. There are even some indications that we may be at hazard of overshooting projected national needs for health professionals.[23,24]

Better Organized Care for Special Groups at Special Risk

During the 1970s, a number of programs have convincingly demonstrated that the organization of medical care for special groups with special problems can substantially reduce hospital costs, mortality, or the burdens of chronic illness. Let us illustrate with three examples.

Improving the Outcome of Pregnancy.—The evidence mounts that properly organized and appropriate care of pregnant women before and at the time of delivery can make substantial inroads on infant mortality, birth defects, and maternal mortality. In most instances such care need not be complex or expensive. During the last ten years, the Frontier Nursing Service in Kentucky has succeeded in markedly reducing infant deaths in a poverty-stricken, remote, rural area by an organized system of nurse and midwife care. In fact, their infant mortality is now below that in the rest of the state.[25] In a similar fashion, a Georgia study showed that the introduction of a well-organized maternal and infant care program was successful in sharply reducing prematurity and in dropping infant mortality by 40% in areas served when compared with similar counties in which no such services were available.[26] Both of these programs succeeded in substantially reducing maternal mortality as well.

Reducing Illness in Children.—In a similar vein, well-organized programs for youngsters have clearly decreased the days of illness and the use of expensive hospital facilities in a number of areas where planned programs have been put in place. The Boston Pediatric Center reduced the need for hospitalization of children by 36% in just two years following the introduction of a comprehensive program of child care.[27] A similar effort carried out in a Rochester, NY, neighborhood health center led to a 50% reduction in the number of hospital days required for children participating in the project, and the amount of time children were ill was also dramatically reduced.[28]

For example, a comprehensive health program for children established in a poor section of east Baltimore produced a 60% reduction in the incidence of rheumatic fever among children in the program.[29] Translated into human terms, in the five years prior to the introduction of the program, rheumatic fever, with its very high incidence of crippling heart disease, developed in 51 children in the target area. Only 11 were so afflicted during a similar period while receiving well-organized care. This means 40 children will have been spared possible heart disease of a kind that used to kill many in their young adulthood.

Organized Care of Chronic Disease.—Other studies have shown that thoughtfully organized care for certain specific types of chronic illness can again make a heartening difference in human misery. An impressive study emanating from Memphis—a joint effort of the local health department, the City of Memphis Hospital, and the University of Tennessee—deserves wide attention.[30] Facilities to care for diabetic patients were decentralized for ready accessibility and staffed by specially trained nurses guided by protocols. Over a two-year period, the costs of ambulant care for diabetic patients were reduced to one fifth that given in the medical center facilities. At the same time, there was a 42% reduction in hospitalization required for the diabetic persons receiving care. Episodes of diabetic acidosis, serious infection, and problems relating to peripheral vascular disease were greatly reduced by a plan that introduced a simple, straightforward, and practical system of care.

The Improving Health of Americans

Have these changes in the apparent availability of physicians, the increased numbers of health professionals, and better organized programs to manage special groups been paralleled by any changes in health statistics? Again, the answer is yes.

First, although it has been largely ignored, death rates of Americans have been falling for the last seven years. From the mid-1950s until 1968, the downward trend in age-adjusted death rates leveled off and fluctuated within a narrow range. However, between 1968 and 1975, they dropped by almost 14%. The death rate for a population of 100,000 was 764.6 in 1955, 760.9 in 1960, 746.7 in 1968, and 642.1 in 1975. This rate of decrease is as high as we have seen anytime this century.[31-33]

Similarly, and again without much heralding, infant mortality has been continuing to decline. From 1960 to 1975 it fell by 38%, from 26 to 16 infant deaths per 1,000 live births, the lowest ever recorded in the United States.[33] This seems of particular interest because the conventional wisdom of the late 1960s was that we had gone about as far as we could go toward reducing infant deaths. While family planning activities are an important component of this change, this is not the whole story, and infant mortality is continuing to fall. Lest we become too self-congratulatory about this, it should be pointed out that similar improvements in infant survival have occurred in most industrialized Western nations. Thus, the relative ranking of the United States within the family of nations has not changed materially.[illegible]

Accompanying these changes in infant mortality, national maternal mortality also dropped an impressive 71%, from 37.1 to 10.8 deaths per 100,000 live births between 1960 and 1975.[illegible]

Some other indicators of improving health statistics should also receive broader attention. The story of coronary heart disease, our leading cause of death, is a fascinating illustration. After its initial recognition in 1912, deaths reported from fatal coronary artery disease increased steadily throughout the 1930s, the 1940s, and the 1950s. It is generally believed that this increase has continued relentlessly. Indeed, a recent national television program was titled "Heart Disease—a 20th Century Epidemic."

In point of fact, the increasing toll of deaths from coronary artery disease peaked in 1963, although this was not appreciated or well recognized until almost ten years later. During the 12-year period from 1963 to 1975, death rates ascribed to coronary heart disease have fallen 22%. The fall was 5% between 1963 (286.4 deaths per 100,000) and 1968 (270.0 deaths), but 18% between 1968 and 1975 (222.5 deaths). Not only is a fall occurring, but it seems to be accelerating.[illegible] Here again is a quite dramatic change. The reasons for the decline are not known. Is it more exercise? Is it less use of saturated fats? Is it more equanimity? Better medical treatment? The declining use of cigarettes? (There has been a 34% fall in the incidence of smoking among young men between 21 and 24 years of age.[illegible])

While we are all very much aware of the rising death rates caused by cancer, ten of the first 15 causes of US deaths have declined. Thus, downward trends in deaths owing to strokes, diabetes, and peptic ulcers have also taken place.[illegible] That we do not know the reasons for these improvements is frustrating, but the changes should not be ignored. These shifts do not suggest an overall worsening health situation for those who live in the United States. We must be doing some things right, and there seems to be room for some cautious optimism.

These encouraging evidences of progress also illustrate another point—how subtly change can occur without our recognizing that it has taken place. Often there is a long period of intense effort and considerable turbulence with very little apparent effect, and discouragement begins to mount. Then all of a sudden, changes appear to take place almost overnight without our really knowing why. But the message is clear. Access to health care is improving, more institutions and people are involved, and we are beginning to achieve equity in providing medical care for the poor and minorities.

In parallel with this, certain statistics regarding the health of Americans are showing improvement. It is important to be aware of these changes in planning for a healthier future.

Agenda for the Future

The problem of the cost of care that triggered public concern about health and medical services remains very much with us, and here the "crisis" continues. Since the 1960s, escalating health care costs have been one of the major problems facing the nation. They remain so. During the last decade, we spent more for health and medical care than we did during the entire previous 35 years.[illegible] An average hospital stay cost $311 in 1965; it was $1,017 in 1975.[illegible] With health expenditures for a family rising from $567 in 1960 to $2,106 in 1975, this has proved a steadily escalating burden for most American families.[illegible] If they cannot be contained, costs may prove to be the Achilles' heel of this country's arrangements for health services.

Also, while as a nation we have reduced the problems the poor have experienced in obtaining medical attention, we have not, to date, done so well in eliminating similar difficulties for rural citizens. In 1970 urban residents saw physicians 3% more frequently than did those of rural areas. By 1976 the number of physician visits made by rural dwellers had actually fallen, leaving a gap of 12%.[illegible] Part of this gap continues to relate to the disparity in health care financing between urban and rural areas. Both public and private health insurance programs continue to make it financially more attractive for health professionals to remain in urban communities.[illegible]

Table 2.—Number of Visits to a Physician by Age and Income, 1970 to 1976

	Age 1-5, yr		Age >65, yr	
Income	1970	1976	1970	1976
High	3.9	4.5	6.5	6.5
Low	2.5	3.7	6.3	6.0
Gap, %	36	18	3	7.6

Table 2 shows that there have been disappointingly small gains for two groups, children and the elderly in low-income categories. Both these have lagged far behind the rest of us, and we have not, as a nation, succeeded in moving them into the mainstream of American medical care[illegible] (unpublished data from the 1976 Health Interview Survey).

The reasons for this are the obvious ones. Both children and the elderly need outside help to get into the system; they are dependent on others. Consequently, it requires special programs and special organizational structures to assure that available services are brought to them, or they to the services. The profound, often life-long impact of neglected health problems in children and the cost burden such neglect places on society are too well known to need detailing here. The kind of evidence described, which shows that specially designed systems can both reduce costs and the burden of illness for children, makes us feel that new approaches to render more effective care to them and other special groups deserve national encouragement.

There is also the problem of the "quality" or the "texture" of the patient-health professional interaction. It varies widely in its promptness, its appropriateness, its dignity, and its human-caring qualities. The vast majority of the well-to-do receive their medical care in private settings—in the physician's office, in the home, or through telephone contact with their doctor. The poor receive a much greater proportion of their care from hospital outpatient departments and health clinics.[illegible] Indeed, during the 12-year period we have been examining, there was a 150% increase in outpatient visits to hospitals.[illegible] The quality of these interactions needs more attention to make them more appropriate and more people-oricated. The "physician visit" of an indigent mother to a Medicaid mill or an overcrowded outpatient department with long waits, hard benches, shifting medical personnel, and impersonal care is not the same physician visit experienced by patients of middle and upper income.

If these physician visits are to improve, it is clear that this nation needs to change many of its ways of providing out-of-hospital care. There is considerable evidence that suggests that better organized ambulatory care will not only lead to more responsive patient services but will also help to contain medical care costs.[47,48] But here we are faced with a troublesome national paradox. While as a nation we finance expensive hospital care through a variety of insurance and public-assistance programs, we have not developed satisfactory ways to cover the costs of ambulatory care that might eventually put the rein on escalating medical expenses for most people.[49] The development of better financing of ambulatory services remains a major national problem that must be met in the future by health-financing programs less inflationary than those of the past.

Comment

It is quite clear from the data outlined here that our society can make progress. There remains a large and important agenda ahead, but the data presented here suggest that we have learned much about how to improve out-of-hospital care in this country. They suggest that many groups focusing on the same problem can produce encouraging potential solutions to larger national problems. What has happened seems an example of how independent people and groups can see national priorities and respond to them.

As this country looks forward to its next 100 years, it is our hope that we discard the feeling that our social institutions are unable to cope with national problems. In the health sector, significant progress has been made, and possibilities for yet more improvement exist for the future.

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THE CONTRIBUTION OF SPECIALISTS TO THE DELIVERY OF PRIMARY CARE

A New Perspective

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Abstract Despite increased numbers of medical-school graduates and opportunities for "primary-care" specialty training since the mid-1960's, many believe that the shortage of physicians delivering generalist care will continue through the 1980's. Missing, however, is solid information on the role of physician specialists in providing such care.

Two national studies have shown that one of every five Americans now receives continuing general medical care from a specialist physician. Our study suggests that, despite the current shortage of generalist-physician services, continuing specialist participation in primary care will lead to sufficient generalist medical services by the mid-1980's. Whether specialist participation is the most appropriate or cost-effective way to improve access to such care is unclear. However, until this question is resolved, more governmental regulation of graduate medical education may be unwise. Offering all physicians, regardless of specialty, more primary-care experience during residency training might better deal with this aspect of American medical practice. (N Engl J Med 300:1363-1370, 1979)

AFTER the publication of the report of the Citizens Commission on Graduate Medical Education (the Millis Report) over a decade ago, considerable attention was focused on the numbers of generalist physicians emerging from the nation's residency training programs.[1] In the ensuing years a consensus gradually emerged that the country was underproducing generalists, or, in the terms of the commission's report, "primary physicians," who would "serve as the primary medical resource and counselor to an individual or family."

In subsequent years, the commission's concept of the "primary physician" was modified, expanded and eventually equated with what is now called the "primary-care physician." Just what this physician is or does has been continually argued and variously defined by different groups.[2] Yet, despite lack of consensus on the precise training or responsibilities involved in primary care, almost all would agree that the Millis Commission's concept of a physician who provides the "majority of care" for an individual person or a family is of major importance. To date, no published studies have established the extent of the shortage of primary physicians. Most of the evidence of a shortage has been derived from aggregate statistics that show a steady 40-year decline in the percentage of practicing physicians who label themselves as members of a primary-care specialty, or from comparisons between specialty distribution in the United States and other areas, particularly the United Kingdom and Canada, where most physicians have been trained as general practitioners.[3] Most of these analyses have indicated that generalists are and will continue to be in short supply in this country.

To be sure, a few have suggested that a "hidden system" for delivering generalist care within the United States was not being taken into account. McDermott has pointed out that physicians labeled "specialists" provided continuing care for some of their patients, and that manpower plans that failed to recognize this fact would greatly overestimate the deficit of primary physicians.[4] Those who agree believe that ignoring this possibility will lead to proposals for unnecessarily radical reforms of graduate medical education. In the judgment of some, this has already occurred.

Today, vigorous debate on the extent of the generalist-physician deficit and how best to remedy it is still evident. Many of the arguments have been well summarized in a series of recent articles in the *Journal*.[5-8] But despite an avalanche of papers on the topic, there is little solid information on one critical question: How many physician specialists "serve as the primary medical resource and counselor to an individual or family"? Beyond scattered, largely anecdotal reports and limited aggregate statistics,[9] little is known about the severity of the lack of primary physician services as seen by patients or practicing physicians. As recently noted by Thier and Berliner, opinions, not facts, have predominated in this continuing debate about manpower.[8]

Since 1972, the Robert Wood Johnson Foundation, along with many others, has been involved in efforts to increase the pool of physicians and other health professionals involved in bringing general medical care to those who are not currently receiving it. To obtain better data on the problem, in 1973, the foundation, in conjunction with the Department of Health, Education, and Welfare, asked Mr. Mendenhall and his associates at the University of Southern California to design and conduct a study on the precise nature and content of the practices of physicians in 24 different specialties. A preliminary report on this study has been published.[10,11] In addition, Drs. Ronald Andersen and LuAnn Aday at the University of Chicago were asked to undertake a national study of the public's perception of their ability to obtain medical care, and the preliminary findings of this study on

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almost 8000 people have been summarized in a special report.[12]

In this paper we present summary information from the completed parts of a national survey of physicians by the University of Southern California. This survey provides new information on the activities of different specialty physicians throughout the country and describes in detail what physicians do in their offices and at patients' bedsides. In conjunction with data from the national access study carried out at the University of Chicago, this survey suggests that the availability of physicians providing general care in the 1980's will be different from that suggested in earlier predictions.

METHODS

The Encounter Classification

The national survey by Mendenhall and his associates at the University of Southern California was carried out during the years 1973 to 1976. It included a nationwide sample of more than 10,000 physicians in 24 specialties and in a variety of settings. Data were extracted from log diaries maintained by physicians over assigned three-day periods. Physicians recorded information on the nature of over 400,000 patient encounters occurring in the office, in a hospital or by telephone. Data were collected on patient characteristics, patients' previous relations with physicians and the diagnosis, treatment and disposition of each encounter. Response rates in groups of specialists varied from 40 to 80 per cent, with a mean response rate of 62 per cent.

Physicians were not asked to categorize themselves as primary-care providers or to estimate the amount of time spent in primary-care activities. Rather, the survey was designed to provide sufficient information on physicians' activities to permit analysis of what physicians actually did with patients, without requiring self-designations by physicians. The considerable variation among individual perceptions and definitions of primary care seemed to justify this approach.

To identify the generalist-care content of different specialty practices, the survey included a classification for sorting patient encounters into five groups. This classification system was developed with the assistance of Drs. Charles E. Lewis, Philip R. Lee, Edward R. Perrin, August Swanson, Theodore Phillips and Alvan R. Tarlov. The classification is defined below.

First encounter: The patient has not been seen by the physician previously, and the physician's role is not that of a consultant to another physician.

Episodic care: There is an absence of continuity in the physician-patient relation, even though the physician indicates that he or she has seen the patient before. The patient is not a regular patient, although the doctor may believe that he or she provides most of the patient's care.

Principal care: There is evidence of continuity; the physician reports having seen the patient before and considers him or her to be a regular patient. Comprehensiveness is suggested, since the physician indicates that he or she provides most of the patient's care.

Consultative care: The visit results from a request from another physician or agency for consultation. Continuity and comprehensiveness are not features of such encounters. Although the patient may have been seen by the physician before and may be regarded as a regular patient, the physician does not provide most of the patient's care.

Specialized care: These encounters show evidence of continuity; the patient is a regular recipient of care, but a limited scope of care is provided. The patient has been seen before, but the physician does not provide most of the care.

This classification provides one method for identifying the major providers of generalist care. Physicians identified as devoting substantial portions of their time to "principal care" appear to be meeting many of the criteria used to define primary physicians in the Millis Report. The key requirements for principal-care encounters in our survey were an assumption by the physician of continuing responsibility for the patient and a commitment to meeting the majority of the patient's medical needs irrespective of their nature.

In designating patient encounters as principal care or other types of care, we relied heavily on the physician's judgment on whether he or she was the patient's regular source of care and provided the majority of the patient's care. Clearly, the accuracy of this assessment is critical to our analysis. One obvious pitfall would be differing perceptions among physicians about what constitutes the majority of care. Because of this difficulty and other concerns about the reliability and validity of data collected by the log-diary method, an independent evaluation was also undertaken by the Battelle Human Affairs Research Center in Seattle.

A sample of 374 physicians were independently interviewed, and these results were compared with those obtained in the study at the University of Southern California. In the Battelle validation study, 93 per cent of the physicians sampled indicated that, to them, providing the majority of a patient's care meant providing all physical and emotional care — both therapeutic and preventive. Moreover, these criteria did not differ among the specialties sampled. The Battelle study also examined the reliability of the principal-care category derived from the log diary. The responding physicians were interviewed, and their responses compared with information available in the patients' medical records. In this instance, the Battelle study found that the principal care category as reported in the physician's log diary was confirmed in 89 per cent of the encounters by the information in the medical records.[13] Thus, we concluded that the methodology was sufficiently accurate to permit conservative projections.

Determining the Proportion of the Population with a Primary Physician

The central questions in our study were: Who has a regular, identifiable primary physician? Of those who do, how many receive most of their care from a specialist? These questions were studied by examining the perceptions of patients and of physicians.

A picture of patients' perceptions about whether they received continuing care from a regular physician was developed from unpublished data collected by Drs. Andersen and Aday of the Center for Health Administration Studies of the University of Chicago. The field work was conducted by the University's National Opinion Research Center between September, 1975, and February, 1976. They surveyed a statistically representative sample of the United States population, excluding physicians, to determine who had a "regular source" of care. Interviews were conducted with 7787 persons in 5432 randomly selected households across the nation. There was a deliberate oversampling of blacks in the rural South and of Spanish Americans in the Southwest.

To estimate the number of patients receiving the majority of their care from specialists, a simple equation was based on data from three sources. The numerator contains the average annual number of ambulatory principal-care visits to each specialist (the supply of principal care). The denominator contains the yearly average ambulatory-visit rate of persons identified as using a particular specialty physician as their usual source of care (the patient demand for principal care). The resulting figure denotes the average number of patients who receive the majority of their care from a particular specialist. This figure, labeled the "average principal-provider capacity" of the specialty, is then multiplied by the number of physicians in each specialty, to yield the amount of primary-physician responsibilities of that specialty.

$$\begin{array}{c}\text{Average no. of patients}\\ \text{receiving majority of}\\ \text{care from a specialist}\end{array} = \frac{\text{Supply of Principal-Care Visits}}{\text{Average Patient-Visit Rate}}$$

$$\begin{array}{c}\text{Total no. of patients}\\ \text{receiving majority of}\\ \text{care from a particular}\\ \text{specialty group}\end{array} = \begin{array}{c}\text{Average no. of}\\ \text{patients receiving}\\ \text{majority of care}\\ \text{from a specialist}\end{array} \times \begin{array}{c}\text{No. of}\\ \text{physicians}\\ \text{in the specialty}\end{array}$$

The numerator is derived from an analysis of the log-diary data collected by the University of Southern California. The denominator is derived from published and unpublished data from the National Center for Health Statistics Health Interview Survey of a continuing nationwide sample of 50,000 households. Results of the questionnaire survey provided data on the yearly number of ambulatory visits made by patients who identified themselves as the regular patients of selected specialists.[14-16] Data on the number of physicians in each specialty were derived from the staff papers prepared for the Graduate Medical Education National Advisory Committee.[2]

For subspecialties for which no data were available, the appropriate overall specialty rate was used. Because the supply-of-principal-care estimates included only ambulatory visits, the physician-visit rates were adjusted downward to account for the telephone contacts reported in the Health Interview Survey. The resulting regular-patient annual ambulatory-visit rates used in the calculation ranged from 4.1 for obstetricians and gynecologists to 5.1 for cardiologists.

It was thus possible to estimate current principal-provider responsibilities for each specialty, with variations for practice arrangements (office-based versus hospital-based). Three features of these estimates deserve mention. First of all, these figures, even with their limitations, provide an improved alternative to the use of conventional ratios of physician to population or primary-care physician to population for judging the adequacy of the physician supply; they reflect actual patterns of clinical practice of various specialties in different geographic regions, rather than the presence or absence of a particular specialty label. Secondly, these figures, unlike most aggregate estimates, are based on current patient behavior in seeking care and reflect the characteristics of today's health-care arrangements. Thus, they provide a more realistic base line for use in projecting future changes according to ways in which physicians may be trained, organized or reimbursed for their services. Finally, these estimates are based on current patterns of the manner in which patients use physician care (demand) and do not necessarily reflect the actual clinical need for services.

The use of patient-demand figures in making our estimates can be justified on several grounds. In the first place, although the supply of physicians is increasing rapidly, the overall physician-visit rate per patient has been more or less stable throughout the 1970's — ranging between 4.8 and 5.1. Furthermore, the physician-visit rates used in these estimates are higher than those in published studies of populations receiving medical care in delivery systems thought to be without financial or professional barriers to needed care. For example, our pediatrician-visit rate of 4.4 (excluding telephone contacts) is well above the rate of 3.1 including telephone encounters reported for a comprehensive pediatric-care program in Rochester.[17] The average physician-visit rate in health maintenance organizations throughout the country is 3.4[18] — well below the average rate used here. Similarly, the rates used here are well above the average (three to four) per person in Great Britain.[19]

Further adjustments were needed because in the study at University of Southern California data were not available for all specialties. The specialties for which data were available are general and family practice, internal medicine, pediatrics, obstetrics and gynecology, allergy, dermatology, otorhinolaryngology and most of the subspecialties of internal medicine, including cardiology, pulmonary disease, gastroenterology, endocrinology, infectious disease, rheumatology and hematology. For the medical subspecialties for which data were not available, the principal-provider-capacity figures representing the average of all completed medical subspecialties were used. For general osteopaths, the general-practice principal-provider figure was used; for specialist osteopaths, the related average estimate for the medical subspecialties was employed.

Two large groups of physicians with a substantial potential for delivering principal care remained — general surgeons and psychiatrists. For these groups, data obtained in the Health Interview Survey on patient visits to regular physicians were used. In this survey, patients were asked to name the specialties of their regular physicians. Although such data have obvious limitations, the average number of persons using general surgeons as a regular source of care in that survey was close to that calculated for otorhinolaryngologists in the study at the University of Southern California (199 to 296 persons annually for office-based physicians). Estimates of the average principal-provider capacity of psychiatrists were similarly derived.

Because of inadequate data, about 113,000 physicians, or almost one third of the active physician supply, were excluded in the estimates of total principal-care coverage in 1976. Thus, surgical specialties other than obstetrics and gynecology, otorhinolaryngology and general surgery were not included in extrapolations on principal-provider coverage. Similarly, the estimates excluded any principal-care coverage provided by "other specialties," such as anesthesiology, neurology, pathology and radiology. Many of the physicians excluded were hospital based and, therefore, would not be expected to provide substantial amounts of principal care. However, since we excluded almost one third of the nation's practicing physicians from the estimates, we think that we have been conservative in estimating the number of patients who receive the majority of their care from specialists.

Projecting the Nation's Future Capacity to Provide Primary Physicians

Estimates of the capacity of the future supply of physicians to provide general medical care for the nation were based on the current principal-provider-responsibilities assumed by various specialists. No improvement in the current geographic distribution of physicians was assumed.

The basic methodology was simple; the average principal-provider responsibilities for each specialty were multiplied by the number of physicians active in those specialties to estimate the number of persons in the country for whom a principal physician would be available. These "covered population" figures were compared with total population data[20] to determine how many individual persons had a primary physician. With the same approach but the appropriate figures on the size of the physician pool, the specialty mix and the population size, a retrospective view of this situation was calculated for 1965. The calculations for 1980, 1985 and 1990 were based on physician-supply projections prepared by the Graduate Medical Education Advisory Council.[2] These estimates are cautious in their projections of possible shifts in the number of young physicians electing primary-care residency training. They assume that the trends in residency choices between 1968 and 1974 will hold through 1980, and that the distribution will remain stable thereafter.

RESULTS

The Provision of Principal Care by Specialists

The data in Table 1 indicate that, sometimes to a surprising degree, physicians in all specialties are the principal source of care to a substantial portion of their patients. General and family practitioners head the list in concentration on principal-care work, but, among the 14 specialties for which data are currently available, physicians who label themselves specialists indicate that from 20 to 72 per cent of all patient encounters are in the principal-care category. These data document a widely held but previously unsubstantiated belief: conventional labels do not always correspond with actual practice. Many specialists also serve as general physicians, and some "primary-care" physicians deliver general medical care to fewer patients than is commonly supposed.

Tables 2 and 3 support the accuracy of the practice characteristics in Table 1. Among patients who are said to depend principally on specialists for all their medical needs, one might expect to see a range of ailments not confined to the physician's area of specialization. One would also expect the range of ailments presented to specialists in principal-care encounters to be broader than in those physicians' consultative or specialized-care encounters. This appears to be the case.

For example, Table 2 shows the range of chief problems presented to cardiologists by patients 55 to 64 years old, as compared with those presented to

Table 1. Percentage of Patient Encounters in All Practice Arrangements.

SPECIALTY	TYPE OF ENCOUNTER				
	FIRST	EPISODIC	PRINCIPAL	CONSULTATION	SPECIALIZED
General practice	10.5	4.9	80.1	2.2	2.4
Family practice	13.1	4.1	77.7	2.7	2.3
Pediatrics	15.5	4.0	72.3	5.3	3.0
Internal medicine	13.2	5.2	61.9	15.3	4.1
Obstetrics/gynecology	13.2	4.0	65.0	6.3	11.4
Cardiology	6.6	5.4	58.2	21.7	8.1
Gastroenterology	9.4	8.3	42.3	34.5	5.6
Pulmonology	10.9	8.4	41.6	31.9	7.0
Allergy	7.5	3.0	32.9	9.0	47.5
Dermatology	23.5	10.7	16.7	6.7	42.4
Endocrinology	12.0	6.3	45.7	25.6	10.4
Infectious disease	11.6	9.8	22.6	54.4	1.7
Rheumatology	9.0	5.6	52.9	16.9	15.5
Otorhino-laryngology	26.3	9.0	22.5	14.7	27.4

Table 2. Percentage of Primary Diagnoses in Patients Aged 55 to 64 Years.

Diagnostic Categories	General Practitioners	Cardiologists	
	Principal-Care Patients	Principal-Care Patients	Consultative Patients
Infective & parasitic diseases	1.2	1.6	1.6
Neoplasms	2.3	1.4	—
Endocrine, nutritional & metabolic diseases	11.3	5.4	0.8
Diseases of the blood & blood-forming organs	0.5	0.3	0.8
Mental disorders	3.3	1.9	—
Diseases of the nervous system & sensory organs	2.0	1.3	—
Diseases of the circulatory system	26.3	70.0	81.3
Diseases of the respiratory system	8.3	3.5	—
Diseases of the digestive system	4.9	4.0	2.9
Diseases of the genito-urinary system	6.5	1.1	—
Diseases of the skin & subcutaneous tissue	4.1	0.2	—
Diseases of the musculoskeletal system & connective tissue	8.7	2.7	1.7
Symptoms & ill-defined conditions	4.2	2.6	7.1
Accidents, poisonings & violence	7.0	0.6	—
Special conditions & examinations without sickness	5.4	3.8	3.1
Other	0.0	0.2	0.8

general practitioners by patients of the same age. Among the cardiologists' principal-care patients, the expected concentration on circulatory work is found, although a substantial array of noncirculatory problems is also reported. However, noncirculatory illnesses are more common in these patients than in cardiologists' consultative patients.

Although most of these principal-care patients had circulatory problems, 30 per cent of the cardiologists' patients had other primary diagnoses generally considered to be within the province of generalists or other specialists. A similar pattern was found in the practices of other specialists. Moreover, the diagnostic distribution of problems other than the chief ailment presented by principal-care patients of other specialists was similarly broad. A substantial number of primary-care problems, then, are being handled by specialists and are incidental to the treatment of specialty-related ailments.

Table 3 provides additional data on specialists' roles as primary physicians. Physicians were asked to score encounters according to the severity of the primary problem and the complexity of the case. Specialists typically gave somewhat higher severity ratings and substantially higher complexity ratings to their principal-care patient visits. However, most of the problems presented by specialists' regular patients were not regarded by the physician as either severe or complex. Thus, it seems unlikely that, when a specialist assumes responsibility for a patient's general medical care, only very ill patients or very specialized problems are involved.

The evidence presented to this point will be thought by many to support the argument that substantial amounts of generalist care can be and are delivered through a "hidden network" of specialty physicians. Other data collected in the survey permit further characterization of the patients who have benefited from the network.

Many specialty physicians, particularly cardiologists, pulmonologists and gastroenterologists, appear to be more likely to meet the medical needs of older patients than of younger ones (Fig. 1). In addition, the more important a particular age group in a physician's practice is, the greater is the representation of principal-care work in that group. Thus, obstetricians and gynecologists are important principal-care providers to women in their 20's but are much less so to women in their 40's. Dermatologists and allergists are more important principal-care providers to teen-agers and patients in their 20's, but not to young children or the elderly.

Estimates of Number of Patients with a Primary Physician

Data from the study by the University of Chicago on access to care presented an interesting and unexpected picture of patients' perceptions of the availability of regular care. As shown in Figure 2, this study indicates that 78 per cent of Americans had principal physicians whom they could identify by name. Of the 22 per cent who did not identify a specific physician, 7 per cent indicated that they were seldom ill and did not need a regular physician. Three per cent had no doctor at that time; either they had recently moved or their doctors had recently terminated their practices. Given the mobility of Americans and the good health of many young adults, it seems reasonable to assume that, at any time, approximately 10 per cent of the population will choose not to have a regular physician.

Thus, the Chicago study suggests that only about 12 per cent of Americans believe that they are without a regular doctor. This proportion is not unimportant; to have 26 million Americans in this category should

Table 3. Nonhospital Encounters with Office-Based Physicians in Patients Aged 55 to 64 Years.

Specialty	% of Problems Described as "Severe"*	% of Encounters with High-Complexity Rating†
General practice	5.4	8.8
Internal medicine	7.6	17.8
Cardiology	7.4	22.5
Dermatology	11.9	17.2
Otorhinolaryngology	9.9	19.2

*Physicians labeled severity of primary problem as "severe-acute" or "severe-chronic."

†Physicians scored each encounter according to the difficulty of selecting & providing therapy, performing or interpreting diagnostic tests & communicating with patients regarding their problems. "Complex" refers to encounters labeled as "extensive" or "comprehensive" in complexity.

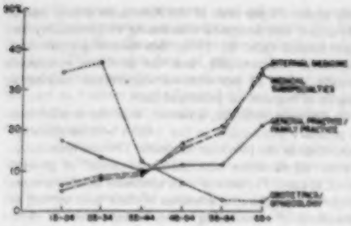

Figure 1. Age Distribution of Patients Managed by Various Specialty Physicians.

give us pause. Whereas many in this group receive care from institutions, at least 2 per cent of the population appear to be unable to obtain any regular source of care. As might be expected, Spanish Americans in the Southwest and poor blacks in urban areas seem to have the greatest difficulty obtaining care. This 12 per cent — those without any source of care and those with an institution instead of a physician as the source of care — appear to represent the current shortage in the country's capacity to provide primary physician care. The high mobility of our population, coupled with the lack of perceived need for regular physician contacts among some relatively healthy groups, permits the tentative conclusion that 90 per cent coverage may well be the maximum attainable for the population as a whole.

Some would probably argue that these data from the University of Chicago yield too generous a view of primary-care coverage of the population by existing physicians. Patients may indicate that they have regular physicians but still encounter access problems. Data from the University of Southern California provide a more conservative picture. The initial findings on the principal-provider responsibilities of different specialists are shown in Table 4. These results require careful interpretation.

The estimates in Table 4 reflect total work loads, geographic locations, and concentrations on specialty and consultative work of physicians in this country and the severity of the ailments of their principal-care patients. For example, two physicians in different specialties with comparable work hours and similar principal-care concentrations may give primary care to different numbers of patients, depending on the type of populations in their practices. As shown in Figure 1, the patients of the general internists were considerably older than those of the family practitioner. The data on encounter severity and on complexity suggest that the internist's principal-care population may also be sicker. Thus, these patients may require more time. In addition, the patients of internists are more often hospitalized; 28 per cent of the internist's principal-care encounters occur at the hospital bedside, as compared to 16 per cent of the family practitioner's. Consequently, even a general internist who does little consultative or specialized work probably cannot assume principal responsibility for as many patients as can the general or family practitioner.

That some specialists serve as principal-care physicians to the extent indicated here may cause concern. The data provide few clues about the quality of principal care given patients or the appropriateness of specialists' assuming primary responsibility for so many patients. The age distribution of principal-care patients is relevant in assessing these issues. Most principal-care patients of obstetricians and gynecologists, for example, are 15 to 34 years old; their medical-care needs are relatively focused, and their needs outside the specialty area are comparatively limited. Women in the older age groups make relatively little use of obstetricians and gynecologists as primary physicians.

Future Projections

Using data on principal-provider coverage derived from the study at the University of Southern California, we have estimated the past and future capacity of physicians in the United States to meet demands for principal care (Fig. 3).

These estimates assume no changes in current principal-provider responsibilities or geographic maldistribution of physicians and do not take into account the growing numbers of nurse practitioners and physician assistants. They are based on relatively conservative assumptions about the future share of residencies in primary-care fields. Furthermore, the 113,000 physicians in subspecialties on which data were not available were not included in these calculations.

The retrospective estimate shows, as suspected, that there was a serious shortage in primary-physician coverage of the population in 1965 (Fig. 3). Only 55 per cent of the population had a regular principal provider of care, and 15 per cent received generalist care from a physician with a specialist label. This situation has improved since then. Although there are differences in the patient loads of office-based and

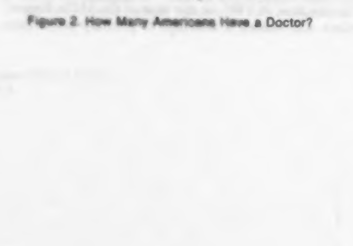

Figure 2. How Many Americans Have a Doctor?

Table 4. Estimated Principal-Provider Patient Loads of Office-Based Physicians.*

Specialist	Average No. of Persons Covered per Physician
General practitioner	870–965
Family practitioner	1004–1127
General internal medicine	468–523
Pediatrician	861–953
Obstetrician or gynecologist	648–743
Cardiologist	288–308
Gastroenterologist	208–233
Pulmonologist	224–249
Allergist	345–375
Dermatologist	250–331
Endocrinologist	289–339
Infectious-disease specialist	163–228
Otorhinolaryngologist	199–296

*The low end of the range is based on principal-care visits alone; the high end includes the estimated percentage of "first encounter" patients expected to become principal-care patients.

hospital-based physicians, these estimates suggest that, in 1976, the supply of physicians was sufficient to offer at least 62 per cent of the population a primary physician. Forty-five per cent received such care from generalist physicians, and 17 per cent from specialists.

These estimates of primary-physician coverage, derived from one national study from the patient's point of view and one from the physician's, suggest that between 62 per cent (Fig. 3) and 78 per cent (Fig. 2) of the population had a regular source of physician care in 1976. The projections in Figure 3 suggest that, largely in response to the increasing supply of physicians, particularly generalists, in years to come, principal providers will be available for 85 per cent of the population by 1985 and 94 per cent by 1990.

These estimates also give an idea of the relative contribution of specialists in meeting the country's need for generalist care. It appears that specialists serve as primary physicians for almost one of every five Americans. This important characteristic of how specialists actually practice must be considered in future health-manpower planning.

Discussion

Since the mid-1960's, it has been widely accepted that the United States has a shortage of generalist physicians. In response, the number of graduates from the nation's medical schools has substantially increased, and training opportunities in what have come to be called the "primary-care" specialties have rapidly expanded. Thus, the number of primary-care residents in training increased by 227 per cent between 1968 and 1978,[21] and the declining ratio of primary-care physicians to patients has been reversed.[22] Despite these changes, many are unconvinced that the quantity of physicians delivering generalist care will be adequate to meet national needs by the 1980's.[5]

The present analysis suggests a different physician-manpower picture than previously recognized. It indicates that, in 1965, at the time of the Millis Report, there was indeed a shortage of primary physicians; only about 55 per cent of the American public had a physician who accepted continuing responsibility for their health care. By 1976, this dismal picture had improved substantially, but the problem remained serious, with 38 per cent of Americans lacking a source of regular or principal care.

Projections indicate, however, that the availability of primary physicians in the 1980's will be different from that in the previous 15 years. The analysis documents the existence of a "hidden system" of general medical care. Physicians with specialty labels currently spend considerable amounts of their time serving as providers of continuing care, irrespective of their patients' medical needs. The type of care provided is generally considered "primary." As mentioned above, one of five Americans receives such care from a specialist.

If current practice patterns remain relatively stable, the increased numbers of new physicians, the growth of generalist residencies and the specialist's continuing willingness to assume and maintain generalist responsibilities should almost eliminate the deficit in primary-physician manpower, which is of such concern today, by the mid-1980's. By about 1985, the nation should have the capacity to make primary physicians available to approximately 85 per cent of the population. This figure approaches the 90 per cent figure suggested in our analysis of data from the University of Chicago as the maximum percentage who will seek continuing care from a doctor.

It should be stressed that these estimates are based on very cautious assumptions regarding the future share of residencies in primary-care fields. Furthermore, they do not include the potential contributions of 113,000 physicians in the subspecialties on which data were not available, and they assume no improvement in the geographic distribution of physicians.

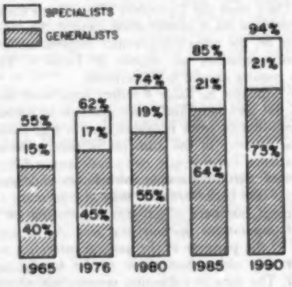

Figure 3. Availability of Primary Physicians, Past, Present and Future.

The numbers reflect the proportion of the general population with a regular "principal provider of care" whether that provider is a specialist or a generalist. Generalists include general and family practitioners, internists, pediatricians and general osteopaths.

Similarly, nurse practitioners and physician assistants, who represent an important resource for the provision of generalist care, were ignored in these projections. Clearly this fact of life — that primary-physician responsibilities are shared by both generalists and specialists in the United States — should be taken into account in future projections or plans for health manpower.

Two questions, which should be considered in deciding whether the emerging system of generalist care is acceptable, were not addressed in this study. Is the quality of generalist care affected by whether it is rendered by generalists or specialists? What is the long-term impact of a heavily specialized physician mix on the overall cost of our health care and on the geographic distribution of health professionals?

As far as quality is concerned, both anecdotal evidence and logic permit widely disparate assumptions about the appropriateness of the route we are currently taking. Some will wonder whether the obstetrician or gynecologist whose services to a young woman are classified as "principal care" was truly supplying the broad spectrum of services that the term implies. Was most attention paid to the pelvis, some to the breasts and little to the rest of the body or the psyche, or was there genuine "primary care"? On the other side of the coin, does the patient with serious cardiac disease or brittle diabetes that requires close supervision receive better primary care from the specialist who best knows the basic problem than he or she would receive if shuttled between a primary-care physician and a specialist? Clearly, answers to these questions are urgently needed.

The present analysis sheds no light on the cost issue. However, the data on relative patient loads, patients' ages, the complexity of their illnesses and the sites at which care is rendered by specialists suggest that it costs more to receive general care from the specialist. In addition, there is evidence that a system tilted toward the specialist does little to improve the already troublesome geographic maldistribution of physicians. Specialists tend to settle in larger communities in close association with complementary specialists and well equipped hospitals, whereas family physicians who are less dependent on technology are better distributed.[23]

Thus, many may wish that, at the time of the Millis Report, a decision had been made not to deal with the shortage of physicians by enlarging the number of specialists who provide such care at the same time that more generalists were emerging. In any case, our data suggest that the nation's primary-physician capacity will be sufficient to meet most of the population's health-care needs without regulatory intervention within six to 10 years.

Whether this increase in primary-physician capacity will best respond to the general medical-care needs of Americans needs further study. Nevertheless, this possibility calls into question the wisdom of drastic federal regulation of graduate medical education until the issues of quality and cost are resolved.

In the interim, since many current and future specialists will serve as principal physicians for many Americans, it may be wise to incorporate broader experience in basic primary care into residency programs for all physicians, not just those designed for physicians who will pursue full-time generalist careers. In the past, specialists emerged from the larger pool of generalist physicians. Current patterns of practice appear to stem from that tradition. Until we are certain about who best provides generalist care at the lowest acceptable costs, residency programs may be well advised to adjust postgraduate training to recognize the reality that many specialists also serve as generalists.

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The
Robert Wood Johnson
Foundation

Special Report

A New Survey on Access to Medical Care

America's Health System: A Portrait 4

Leading Indicators 8-9

Health Opinions of the U.S. Population 14

Number One/1978

Foreword

Americans of all ages, of all races, at all income levels have greater access to health care services than ever before. And by and large, individually, they are pleased with the care they receive.

That is the simple and encouraging message contained in a report of a national survey now being completed. At the same time, a significant majority of Americans also say they believe there is a health care crisis in this country.

Why this seeming paradox?

Politicians, health care professionals, and policy analysts will have this and other riddles to dissect when the findings of a national survey of access to medical care are published late in 1978. The study is more than a compilation of statistics; it seeks to pinpoint and measure significant factors that determine whether or not people obtain the medical care they need.

The Robert Wood Johnson Foundation has supported this study in the belief that a clear and comprehensive understanding of these factors is essential for a large national philanthropy conducting a highly targeted program to assist those seeking ways to improve America's health care system. Obviously, other institutions and groups—both public and private—share an interest in this aspect of the $140-billion a year health enterprise.

When published, this study will present a comprehensive portrait of the nation's health system from the perspective of those it serves. One of its principal uses will be to identify areas that need attention. It also can serve as a benchmark so that future changes in the system's performance can be observed and measured. At the same time, it reveals much about today's world as well.

America's Health Care System: A Comprehensive Portrait

How the nation's 220,000,000 people obtain their medical care (and what they think about it) is probed in a new survey. It reveals that barriers are tumbling, most patients are satisfied, but cost remains an overriding concern.

In the world of business, a variety of indicators reflect the ups and downs of economic activity. Selected separate indicators, for example, comprise the Consumer Price Index, Department of Labor employment statistics, Dow Jones stock averages, and others.

Magazines such as *Business Week* and *U.S. News and World Report* each have identified certain indicators which they believe reflect the state of the nation's economy. *Business Weeks*'s includes net tons of steel, kilowatt hours of electricity, freight car loadings, board feet of lumber, wheat prices in Kansas City, gold prices in London, the prime interest rate, the Federal Reserve money supply, housing starts, and many others.

For businessmen, government officials, economists, bankers, and investors, such indicators are considered essential to decision making. They tell where the economy of the nation is going, and they guide and influence those who have a hand on the tiller.

In the business of health, too, a variety of specialized statistics show how some parts of the system are performing currently:

- the infant mortality rate has decreased in the last five years by 19 percent
- more than 230 million days of care are rendered to 29 million patients admitted to hospitals each year
- health expenditures total 8.6 percent of the gross national product—$140 billion annually
- federal Medicaid payments to states total almost three-quarters of a billion dollars each month
- the ratio of doctors to population has increased from 139 per 100,000 in 1960 to 162 in 1976.

Analysis of these statistics, however, only skirts the fringes of a central question: is health care available to those who need it, and what kind of barriers must be overcome to obtain care? In the jargon of health policy analysts, this crucial issue goes by the phrase access to care.

In "people terms," however, access translates into a multitude of factors which together determine whether or not persons obtain the medical care they need. Is a doctor available? How far away is the doctor's office? How long is the trip? How long does it take to get an appointment? How much time does the doctor spend with the patient? How much does the visit cost? How will the bill be paid? Was the patient satisfied with what the doctor did?

There is about to be completed a study which identifies these and other important factors—indicators—bearing on access. One of its purposes is the development of standard means for consistent measurement of these indicators.

The national survey of access to medical care was carried out by the Center for Health Administration Studies of the University of Chicago.[1] The field work was conducted by the University's National Opinion Research

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[1] **Principals in the study are:** Lu Ann Aday, study director; Ronald Andersen, principal investigator, and Gretchen Voorhis Fleming and Grace Chiu, assistant study directors, all of the Center for Health Administration Studies, University of Chicago, 5720 Woodlawn Avenue, Chicago, Illinois 60637. Support included grants from The Robert Wood Johnson Foundation totaling $1,229,143, and a $250,000 grant from the National Center for Health Services Research for secondary and special analyses.

Center between September 1975, and February 1976. It is based on a sample of 7,787 persons and is statistically representative of the U. S. population.

The study focuses on many factors believed to affect access for the entire population. Moreover, data for each indicator can be examined for sub-groups of the total population—sub-groups defined by a number of important variables, including age; sex; race; income; region of the country; suburban, urban, and rural residence; and education levels. (For a graphic representation, see chart on pp. 8-9.) As a bonus, certain parts of the survey are comparable with other projects carried out in 1963 and 1970, so some trends can be seen.

The survey generated large amounts of data and the analytic task facing the investigators has been formidable. The challenge: out of all the information available, identify those particular indicators which appear to be most significant in determining access for the total population and for sub-groups as well.

In a number-oriented society, nothing makes a problem come alive so much as the measurement of it. Walter Lippman, a half century ago, said: "The printing of comparative statistics of infant mortality is often followed by a reduction of the death rate of babies . . . the statistics make them visible, as visible as if the babies had elected an alderman to air their grievances."[2]

Grievances, indeed, have been aired about America's health system: its cost, and its accessibility to such groups as minorities, rural and inner city residents, and the aged. Attempts have been made to fix deficiencies. Medicare and Medicaid are examples.

The new University of Chicago study promises to provide abundant information enabling an assessment of the impact of these and newer health initiatives. This information will give new currency to the debates which shape changes in the nation's health laws—ranging from recommendations of seeming minor consequence to the sweeping changes implicit in proposals for national health insurance.

Professional organizations, Congress, state legislatures, and other groups will be able to evaluate the relative needs of population groups believed to have particular problems obtaining medical care. Similarly, over time, these data may define the nature of the so-called crisis in American health care.

The study's principal strength derives from its attempt to go beyond the raw numbers and to interpret and analyze what they mean.

This process is now underway by principal investigator Ronald Andersen, 38-year-old sociologist, and his colleagues at Chicago. Ahead lie many more computer runs and much more analysis. Nevertheless, Andersen declares flatly that the work ". . . provides a comprehensive and timely baseline for informing the current debates over national health policy options intended to impact—directly or indirectly—on access to medical care in the United States."

Traditional Health Indicators in Perspective

Much past analysis of the subject of access has focused on counting doctors (with suggested remedies concentrating on increasing the supply of physicians) and has emphasized mortality and morbidity statistics.

But the first approach is akin to analyzing the energy shortage only by counting corner gas stations. And the latter falls short because traditional mortality and morbidity statistics fail to reflect adequately much that the health system does.

A health care system provides useful outcomes other than prevention and cure—reassurance and encouragement, for example. As Walsh McDermott puts it: "Medicine is . . . not a science but a learned profession that attempts to blend affairs of the spirit and the cold objectivity of science. Everything the physician does, therefore, is a blend of technology and samaritanism. By samaritanism is meant that collection of acts, big and little, that lends reassurance or at least gives support to someone troubled by disease or illness."[3]

To illustrate, the clinical capability of pinning broken hips among the injured elderly has not changed the nation's gross mortality statistics, but it has increased the utilization of medical services and it contributes substantially to improving the quality of these patients' lives.

Similarly, take the case of a woman visiting a physician because of a lump in her breast. A diagnosis which reveals the lump is benign does not show up in morbidity statistics, but that diagnosis represents a major benefit to the patient.

It is statistical intangibles such as these—

Publication of the final report is expected late in 1978. For details about the survey, how it was carried out, many of its statistical aspects, and a bibliography, see Technical Specifications on page 15.

[2] **Lippman, Walter.** *Public Opinion.* New York: The Free Press (paperback edition), 1965. p. 239.

[3] **From: McDermott, Walsh.** "Medicine: The Public's Good and One's Own." *Cornell University Medical College Alumni Quarterly.* 40 (1) Winter 1977. pp. 15-24. McDermott is Emeritus Professor of Public Health and Medicine at Cornell and special advisor to the president, The Robert Wood Johnson Foundation.

quality of life, [illegible], and reassurance—that separate mortality and morbidity statistics from the real world.

The Study:
Who Gets What Care

The national survey investigates five principal dimensions impinging on access to care: *source* of care, *convenience* of care, actual *utilization* of care, the *need* for care, and the patient's *satisfaction* with care received. It examines all in considerable detail.

In the 1976 survey year, 76 percent of the population—160,000,000—saw a doctor. The percentage of infants and small children seeing a physician was highest: 87 percent. The percentage declines sharply in the middle and late years of childhood, then climbs slowly through the adult years to a level of 79 percent for those 65 or older.

The report's most significant findings show that the population at large—and every subpopulation group studied—has better access to medical services today than in 1970 or 1963.

There are some instances of dramatic change. Chart 1 shows the improvement experienced by blacks since 1963 in one important measure: percentage seeing a physician at least once in the previous year. And Chart 2 shows how the gaps between persons of different income levels have narrowed, though discrepancies continue.

"These trends," says Andersen, "correspond to those which might be expected as a result of the implementation of Medicaid and Medicare in 1966. Medicaid and most health center programs begun since 1963 were designed to serve the low income population of all ages."

The removal of financial barriers appears to have major impact on whether or not various groups have access to care. Whereas physician utilization by low and medium income groups has moved closer to that for the upper income group (Chart 2), the same narrowing of utilization has not occurred for dentist visits (Chart 3). Andersen concludes: ". . . dental services are least apt to be covered by existing financing mechanisms and it is this service for which the greatest inequities in use by family income and race . . . continue to persist."

The study places special emphasis on whether or not persons surveyed indicated they had a regular physician or regular source of care. Previous studies have shown a strong correlation between having a physician and seeking medical service when illness occurs. More than 78 percent of the population claim to have a physician they see regularly; another 9 plus percent report a regular source of care (e.g., a clinic), but without identifying a particular physician.

That leaves almost 12 percent who have neither a physician nor a regular source of care. Andersen speaks frankly of this group: "Though this may appear to represent a small proportion overall, it means that there are actually an estimated 24 million people who can identify no particular place or provider as their regular point of entry to the health care system."

The survey data reveal that low income groups, urban blacks and Spanish heritage persons in the Southwest were less apt than whites to have their own doctor. And for all races, persons below the poverty level were less likely to have a regular source of care than those above.

Other findings include:

- 11 percent of the population spent at least one day in the hospital in the survey year
- 52 percent had a physical exam
- 49 percent saw a dentist
- rural farm dwellers were less likely than city residents to see a physician
- low income Spanish heritage persons were least likely of all ethnic groups to see a physician
- most persons can reach their regular source of care within 30 minutes
- blacks, when in their doctor's office, wait longer to see a physician than whites
- city residents use specialists more frequently than other groups
- rural residents and farmers make greatest use of general/family practitioners
- 64 percent of the population can obtain a doctor's appointment within two days; 8 percent have to wait more than 2 weeks.

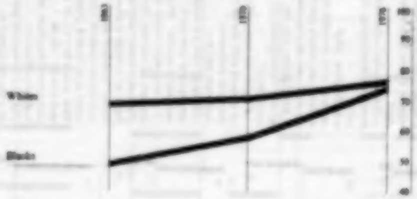
Moving Toward A Measure
of Medical Need

Although the survey's findings clarify the picture of access to health care for different population groups, a central and intriguing question remains: are people really getting the medical care they need?

One of Andersen's colleagues, study direc-

Chart 1

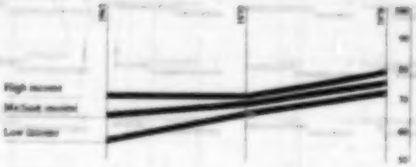
Percentage of Whites and Blacks Seeing a Physician in a 12-Month Period



The percentage of the black population seeing a physician has increased substantially since 1963. While a small gap in physician utilization remains between blacks and whites, it has closed dramatically since 1970. The Chicago researchers report that the largest gains were made in areas of the central city.

Chart 2

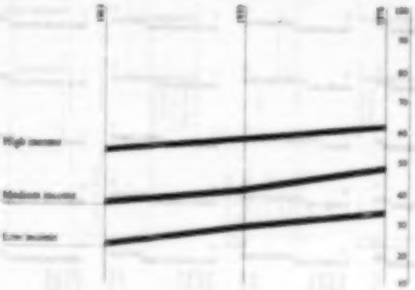
Percentage of High, Medium, and Low Income Groups Seeing a Physician in a 12-Month Period



A comparison by income shows how low income groups have increased their use of physician services. Between 1963 and 1970, both low and middle income groups moved toward the high income group. During the next period, all three groups moved upward together in utilization.

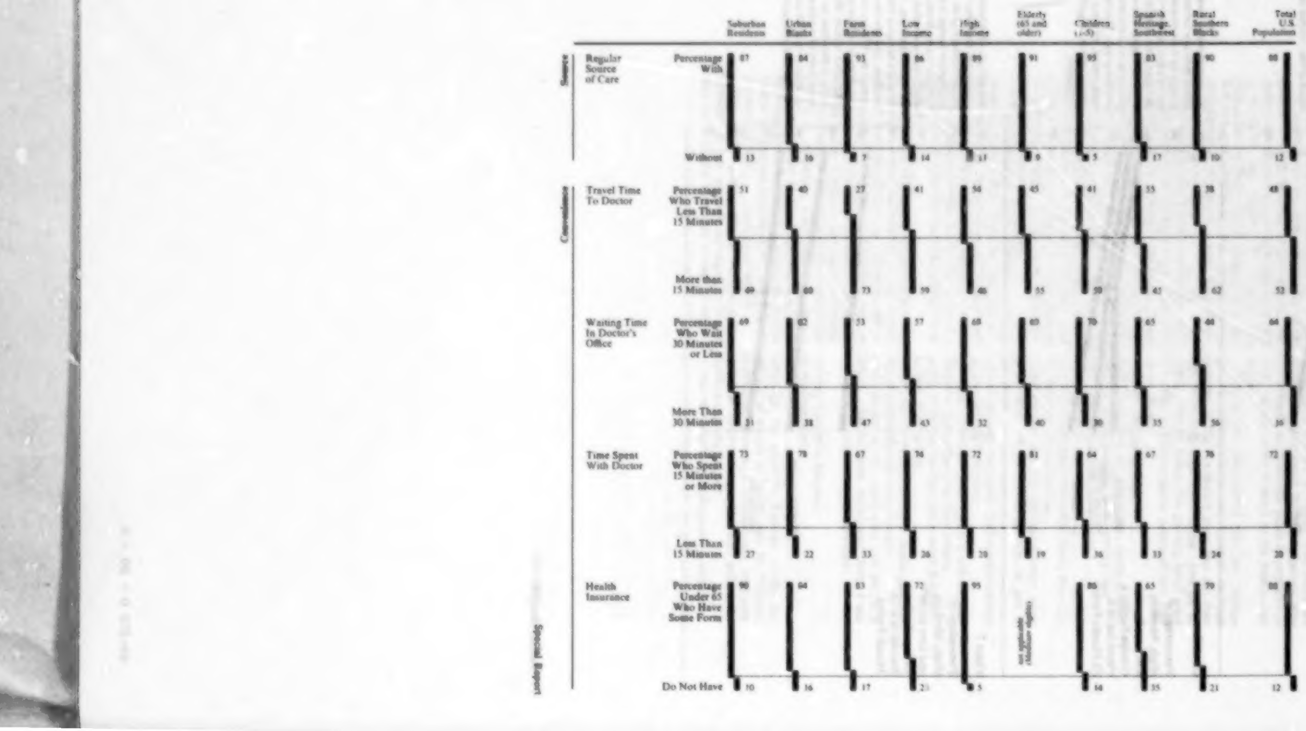
Chart 3

Percentage of High, Medium, and Low Income Groups Seeing a Dentist in a 12-Month Period



The impact of insurance is revealed in this chart showing the percentage of the population seeing a dentist. For all income levels, the utilization of dentists is lower than for physicians. And the gaps between high, medium, and low income groups in 1976 are not significantly different from 1963. One reason: 88 per cent of the population have some form of medical insurance; only 18 per cent have dental insurance.

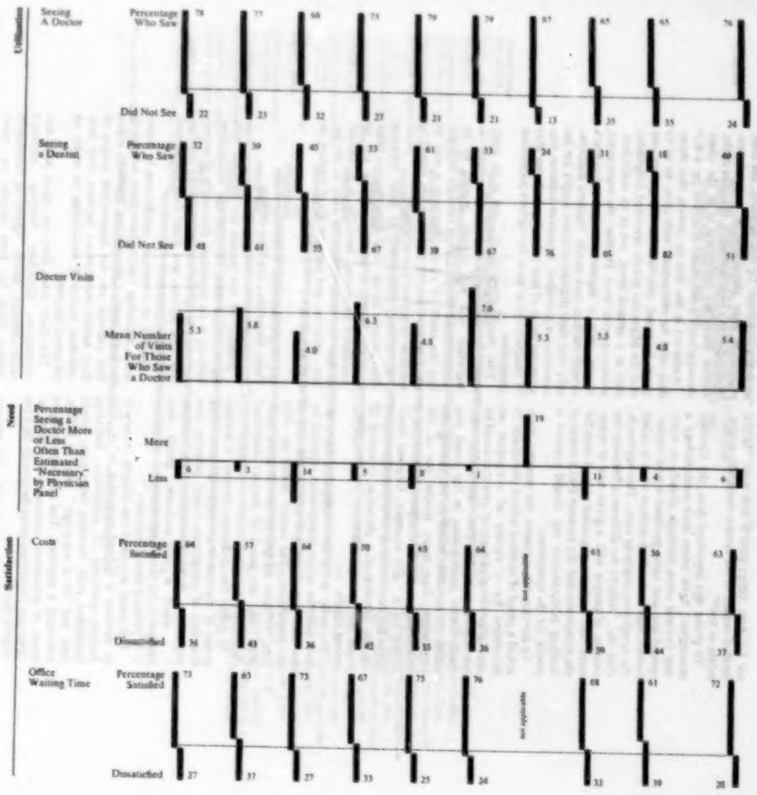
Leading Indicators of Access to Medical Care—A Panoramic View



The conceptual framework developed by the authors emphasizes five principal dimensions which determine access:

- *Source: do people have a regular source of medical care?*
- *Convenience: what are the problems in obtaining care?*
- *Utilization: what services were actually used?*
- *Need: did people get the medical care they needed?*
- *Satisfaction: was the patient pleased with the experience?*

Despite the temptation to seize upon only one or two dramatic indicators, Andersen and his colleagues stress a multidimensional approach. "In examining access," he says, "it is necessary to take into account all relevant factors. If a policy maker were to focus on a single indicator of access, a misleading conclusion could be reached about a particular group. That would be unwarranted—and unwise." In the accompanying chart, selected indicators from the Chicago survey are arranged in a matrix format to permit comparisons among various population groups across a range of factors. An expanded version of this chart is available from the Center for Health Administration Studies, University of Chicago, 5720 Woodlawn Avenue, Chicago, Illinois 60637.


Utilization
Seeing A Doctor
Percentage Who Saw
78
77
68
73
79
79
87
65
65
76
Did Not See
22
23
32
27
21
21
13
35
35
24
Seeing a Dentist
Percentage Who Saw
52
39
45
33
61
33
24
31
18
49
Did Not See
48
61
55
67
39
67
76
69
82
51
Doctor Visits
Mean Number of Visits For Those Who Saw a Doctor
5.3
5.8
4.0
6.3
4.8
7.6
5.3
5.5
4.8
5.4
Need
Percentage Seeing a Doctor More or Less Often Than Estimated "Necessary" by Physician Panel
More
Less
6
3
14
5
8
1
19
11
4
6
Satisfaction
Costs
Percentage Satisfied
64
57
64
58
65
64
not applicable
61
56
63
Dissatisfied
36
43
36
42
35
36
39
44
37
Office Waiting Time
Percentage Satisfied
73
63
73
67
75
76
not applicable
68
61
72
Dissatisfied
27
37
27
33
25
24
32
39
28

tor Lu Ann Aday, puts it this way: "Is the level of access to the system medically appropriate or not?"

To probe this important area, the Chicago researchers have taken their methodology a step beyond some methods already in widespread use and have pursued a new experimental approach which utilizes what is called the symptoms-response ratio. This approach, they say, "reflects the difference between the number of people with a given mix of symptoms who contact a physician at least once for the symptoms and the number that a panel of medical professionals say should contact a doctor for the symptoms."

To develop this measure, the research team asked a panel of medical school physicians to determine for a variety of symptoms an appropriate level of medical care that could be considered standard. They did it this way. Each doctor participating in the panel was asked "to estimate, based on his training and experience, how many people out of 100 manifesting a certain symptom should see a doctor for it." For example, frequent headaches are considered to be a symptom requiring the attention of a physician in nearly all cases for young children, less frequently among adults.

The study group then compared this standard with the actual experiences reported by the total population and specific sub-sets of the population. The result: based on 1976 data, virtually all groups saw doctors more often than the panel of doctors estimated should be the case.

To refine the technique further, a second group of doctors was impaneled consisting this time of community-based, primary care physicians from throughout the nation ". . . since a non-academic group was thought to be more representative overall of U.S. primary care physicians."[4]

This panel provided the criteria necessary to develop a second symptom index. The doctors analyzed 22 symptoms, including headaches, rash, diarrhea, heart pain, weight loss, and "tired mornings," and, as before, estimated a standard. The community-based panel of physicians recommended that patients see physicians more frequently than the original panel.

Armed with this second index, the research team compared it once again with the actual experiences reported by the population and several sub-groups. By this measure, the total population sees physicians 6 percent less frequently than recommended. (Results of the second panel are incorporated in the chart showing leading indicators of access, pp. 8-9.)[5]

Andersen is the first to caution that these data must be interpreted with care, so as to avoid incorrect conclusions. He points out that the physician panels provided judgments only at a general level, not at an individual, patient-specific level. Further, the experiment covers only a segment of an individual's overall medical care needs. Patients undoubtedly visit their doctors at times simply for the reassurance provided. Andersen believes that a special value of this index lies in being able to compare use to need for various population categories.

This phase of the study—still in its early stages of development and refinement—is important and has already proved to be controversial. But Andersen strongly believes that the study of access demands a way to measure need and he and his team intend to continue to pursue this approach.

If, in fact, differences do exist between what patients do and what some doctors think they should do, it perhaps should not be considered surprising. Medicine is an inexact science and wide variations exist in the beliefs, opinions, and perceptions of doctors, as well as patients.

Are People Satisfied? What Americans Think About the Care They Obtain

Whether or not people are satisfied with their medical care, the Chicago researchers believe, is an important dimension of access and one part of the survey measures satisfaction: how patients feel about their encounters with the system.

Studies on consumer satisfaction in many areas, including health, have been increasing in recent years. Critics of this approach argue that patients are not appropriate judges of their health experiences because they lack sufficient technical knowledge to make an informed judgment.

The study team does not agree with that contention. Gretchen Fleming, assistant study director, notes: "Querying consumers derives from the very notions on which democracy itself is defended—that it is appropriate for the public to be invited and even

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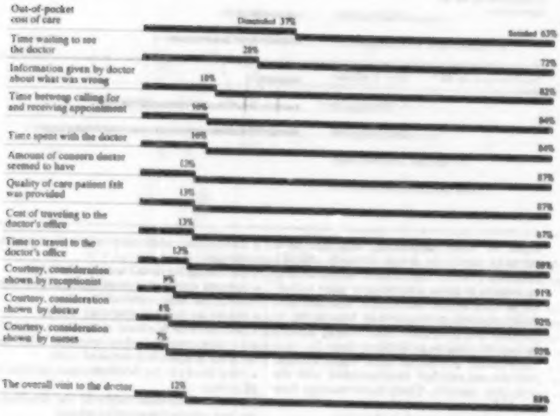
[4] **The primary care physician panel** consisted of 36 physicians from the following specialities: internal medicine, 18; family/general practice, 10; and pediatrics, 8. Physicians from ob-gyn are to be included in future work on this measure. The original panel of physicians included 40 University of Chicago medical faculty from these specialties: internal medicine, 13; surgery, 9; pediatrics, 7; obstetrics-gynecology, 6; psychiatry, 5.

[5] **Among population sub-groups analyzed** thus far, children represent an exception: their utilization pattern is 19 percent above the panel's estimate of need. This finding is for the total population of children, and its interpretation will have to await further data analysis for groups of children described by family income levels and other potentially significant characteristics.

Chart 4

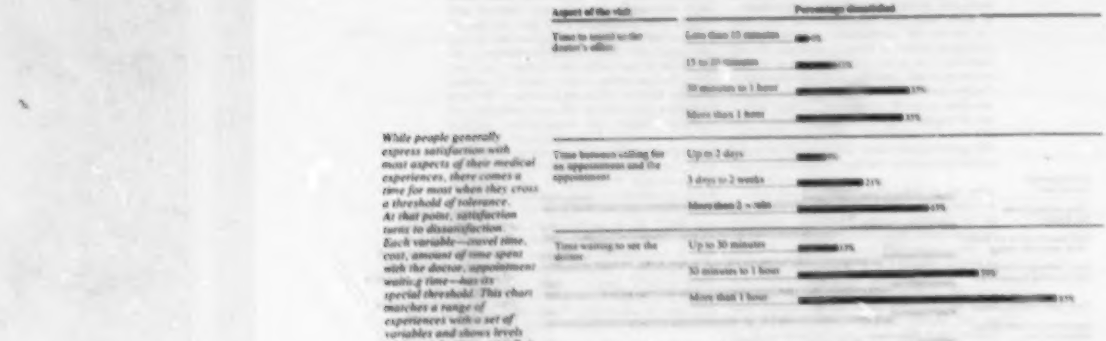
Among Those Who Saw a Physician in a 12-Month Period, Percentage Dissatisfied/Satisfied with Various Aspects of the Visit



To determine whether people are satisfied or dissatisfied with their medical care, the research group asked questions of all persons who had visited a doctor during the past year. The questions probed impressions of specific aspects of the visit. "Responses were very skewed toward the positive end of the scale," the group reports. For the total population, cost is the greatest cause of dissatisfaction. Overall, the chart reveals the U.S. population is generally satisfied.

Chart 5

Among Those Who Saw a Physician in a 12-Month Period, Percentage Dissatisfied with Various Aspects of the Visit Classified by the Nature of the Experience



While people generally express satisfaction with most aspects of their medical experiences, there comes a time for most when they cross a threshold of tolerance. At that point, satisfaction turns to dissatisfaction. Each variable—travel time, cost, amount of time spent with the doctor, appointment waiting time—has its special threshold. This chart matches a range of experiences with a set of variables and shows levels of dissatisfaction. Overall, it captures some sense of the dynamics of the doctor-patient relationship.

urged to voice judgments, and that such opinions should be taken seriously. Should consumers' views appear ill-informed to policy makers or those who possess more technical information on the subject, it is their (the policy makers) prerogative in turn to try to convince the consumers otherwise by making further information available to them."

The study probes in some depth whether patients are satisfied or dissatisfied with the care they receive. Chart 4 summarizes how the U.S. population feels about various aspects of its most recent doctor visit.

Time spent waiting to see a doctor and the amount of information given to the patient by the doctor are major areas of dissatisfaction. But no factor rivals cost as a cause of dissatisfaction.[6]

As with all aspects of the study, each factor has been analyzed by income, age, race, region, sex and other variables, and the following generalizations can be made:

- satisfaction with care received increases with age
- persons in the South are least satisfied
- persons with higher income and more education are the most satisfied
- blacks are less satisfied than whites
- persons who see their own doctor regularly are more satisfied than persons who see different doctors in a series of visits
- rural blacks in the South are least satisfied of all groups
- people of Spanish origin in the Southwest are less satisfied than other whites.

The study team has carried its analysis of satisfaction and dissatisfaction an important step further. Chart 5 illustrates how they analyze different variables. The chart shows a range of actual experiences reported by patients, together with the percentage of patients who are dissatisfied with various aspects of that experience. For example, dissatisfaction with the amount of time it takes to get to the

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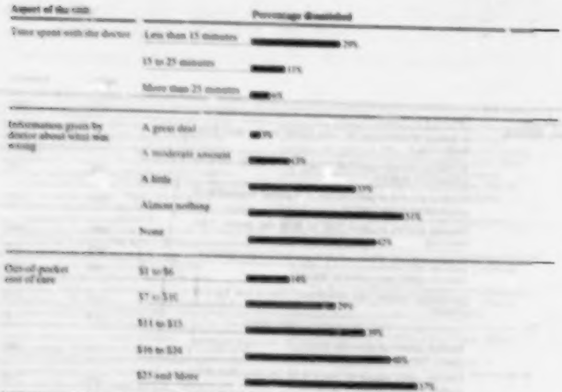
6. Cost and utilization both are being probed in a new study being conducted by the federal government's National Center for Health Statistics (NCHS) which carries out extensive research on many aspects of the nation's health system. The study, which is collecting 1977 data from a national sample of 11,500 households, is being jointly conducted with the National Center for Health Services Research.



doctor's office ranges from a low percentage of 4 percent for those who required less than 15 minutes to a high of 37 percent dissatisfied if the trip took over 30 minutes.

"It is very clear that the kinds of events that surround delivery of care strongly affect people's levels of satisfaction," the study team concludes. "Consumers in general are not inclined to be highly critical of their medical care."

The Paradox of Personal Satisfaction and Perceived Crisis

But then comes a paradox. Despite the survey data which show, generally, a high level of satisfaction, as well as increased access to the health system for Americans of all ages and races, the study also shows that 61 percent of the population—125,000,000 people—believe there is a crisis in health care in the U.S. And another 26 percent are so uncertain they cannot deny it.[7]

Why this paradox exists is a mystery still to be probed—not only by the Chicago team, but by other investigators as well.

It could be a product of the human propensity to seek reassurance and support when in need. When people contemplate their own medical care (i.e., "Were you satisfied with what your doctor did for you?"), the response is from the perspective of a patient—each individual is then a statistic of only one and answers are shaped accordingly.

It is quite another matter to respond to questions about health in the abstract, simply as a part of the aggregate (i.e., "Is there a crisis in health care?").

In spite of these mixed perceptions about what goes on in America's health care system, the national survey of access to medical care provides important new insight into the how and why of the system and is a study of importance likely to be analyzed for years.

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[7] The issue of a crisis in health care was measured in the 1970 survey as well and has been quoted at 76 percent. However, the test question was altered slightly in the 1976 survey, so direct comparison is impossible.

Health Opinions of the U.S. Population[8]

		Agree	Uncertain	Disagree
Some things people say about health care, doctors, and hospitals.	There is a crisis in health care today in the United States.	61%	26%	13%
	A person understands his own health better than most doctors do.	29%	15%	56%
	If I have a medical question, I can reach someone for help without any problem.	70%	13%	17%
	Without proof that you can pay, it's almost impossible to get admitted to the hospital.	58%	25%	15%
	Doctors always do their best to keep the patient from worrying.	66%	24%	10%
	In an emergency, it's very hard to get medical care quickly.	38%	15%	47%
	More hospitals are needed in this area.	39%	28%	33%
	Sometimes doctors take unnecessary risks in treating their patients.	22%	41%	36%
	Doctors always treat their patients with respect.	67%	16%	17%
	Medical insurance coverage should pay for more expenses than it does.	63%	24%	13%
	Doctors cause people to worry a lot because they don't explain medical problems to patients.	40%	20%	40%
	Most people receive medical care that could be better.	48%	35%	17%
	Doctors ask what foods patients eat and explain why certain foods are best.	40%	26%	34%
	If more than one family member needs medical care, we have to go to different doctors.	35%	11%	54%
	There is a big shortage of family doctors around here.	51%	26%	23%

		Yes	No	Uncertain
Opinions about nurse practitioners and physician's assistants doing some of the tasks traditionally performed by doctors.	Do the preliminaries of a medical examination before the doctor comes in, including medical history taking, blood pressure, and so on?	84%	10%	6%
	Decide whether or not you need a doctor when you go to a clinic or a doctor's office when you are not feeling well?	31%	58%	11%
	Provide follow-up care and treatment after a physician has diagnosed your condition and prescribed treatment?	58%	31%	11%
	See pregnant women and babies on their regular visits when nothing seems to be wrong?	46%	36%	18%

[8] **A Health Opinions questionnaire** was an integral part of the national survey. Emphasizing to the respondents that there were no "right" or "wrong" answers, it probed their views on a wide variety of health and personal issues. Much of the data collected in the national survey have been incorporated into various indices and scales, but in this particular section the raw responses themselves reveal interesting information about what the U.S. population thinks about health in the broadest sense. Some examples are presented here. All percentages have been rounded to equal 100 percent across each item.

Technical Specifications

The 1976 survey is the fifth in a series of national household surveys of health care utilization and expenditures conducted by the Center for Health Administration Studies. The previous four—1953, 1958, 1963, and 1970—emphasized estimates of families' total health care experiences and costs. The 1976 survey focuses on access issues. While the emphasis of the 1976 survey differs from earlier ones, some questions were designed for comparability.

The Study: Between September 1975 and February 1976 interviews were conducted with 7,787 persons in 5,432 households representing the non-institutionalized population of the United States (among the exclusions: groups in prisons, long term care institutions, religious institutions, military installations). The sample was representative of a population estimated at 209,065,000. All population calculations in this report are computed on this base. Overall response rate was 85 percent.

Oversampling: There was supplementary sampling of persons experiencing episodes of illness, non-SMSA (Standard Metropolitan Statistical Areas) Southern blacks, and Spanish heritage persons living in the Southwest. Oversampling was done to insure that a sufficient number of cases would be available for analysis. All computations are weighted distributions to correct for the oversampling and to allow estimates to be made for the total non-institutionalized U.S. population.

Regions: Standard U.S. Bureau of the Census regions were used in the study: Northeast, South, North Central, West.

Blacks: Because of the particular variable definitions employed, the category *of blacks* includes a small proportion of other non-white persons.

Urban Blacks: The *urban black* category includes a small proportion of non-urban residents.

Rural Southern Blacks: This category is defined as blacks who reside in areas outside SMSA's in the states of Arkansas, Alabama, Delaware, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North and South Carolina, Oklahoma, Tennessee, Texas, Virginia, West Virginia and the District of Columbia.

Spanish Heritage, Southwest: This category includes persons who had Spanish surnames, or who were from families in which the head or spouse spoke Spanish as a child. The sample was drawn from Arizona, California, Colorado, New Mexico, and Texas.

Suburban Residents: This category includes persons living in SMSA's, but not in the central city.

Income: Family income levels used in the 1976 study are as follows: Low (below $7,999 annual income), Medium ($8,000-$14,999), High ($15,000 and above). Income categories in the three studies—1963, 1970, and 1976—were different to reflect differences in inflation for the respective time periods. For all studies, approximately one-third of all families fell into each of the income categories.

Determination of poverty level cutoffs conforms to a Social Security Administration index.

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Senior consulting editor:
James C. Butler.

Senator SCHWEIKER. The next panel is Dr. Gerald Phillips and Mr. James Endres.

Dr. Phillips is a family physician who practices in Pleasanton, Tex., in the area he grew up. He serves on the boards of both the Camino Real Health Systems Agency, and the Mercy Hospital of Jourdanton. He is here today to share with us his perception of Federal Government involvement in health care delivery in south Texas.

Mr. Endres is currently executive director of the San Luis Valley Health Maintenance Organization in rural southwestern Colorado. Mr. Endres was formerly financial manager of Beech Aircraft. He will describe how a little imagination and cooperation with the private sector has resulted in a success story for the National Health Service Corps and the people in the San Luis Valley.

I will call on Dr. Phillips first.

STATEMENTS OF GERALD B. PHILLIPS, M.D., ATASCOSA COUNTY, TEX., AND JAMES ENDRES, EXECUTIVE DIRECTOR, SAN LUIS VALLEY HEALTH MAINTENANCE ORGANIZATION, ALAMOSA, COLO.

Dr. PHILLIPS. Thank you, Senator. It is a privilege to be here today.

As you stated, my name is Gerald B. Phillips, M.D., I am a physician involved in the private practice of family medicine in Atascosa County, Pleasanton, Tex. Pleasanton is located 35 miles south of San Antonio and 4 miles east of Jourdanton, my boyhood home.

I am a member in good standing of the Texas Medical Association, American Medical Association, and the American Academy of Family Practice. In addition, I serve on the board of directors of the Camino Real Health Systems Agency and Mercy Hospital of Jourdanton.

Formerly, I participated as a member of the board of directors of the Atascosa Health Clinic's rural health initiative of Atascosa County. It is now called the Atascosa Health Clinic, Inc., and it is the activities of this organization and others that I will address this morning.

The RHI program was sponsored originally in Atascosa County by the Southwest Migrant Association. In 1978, the county commissioners court assumed responsibility for the program when an HEW audit discovered missing funds. The commissioners court, becoming disillusioned with the operation, transferred sponsorship to the newly formed Atascosa Health Clinic, Inc., in April 1980.

The clinic is a nonprofit agency, incorporated to provide primary and preventative health care to low-income residents of Atascosa County. There are two clinics staffed by a single National Health Service Corps physician, located in Poteet and in Pleasanton. The clinic also employs an executive director, bookkeeper, secretary, driver, two medical records clerks, a family nurse practitioner, registered nurse, licensed vocational nurse, and a nurses aide. The newly appointed director has had virtually no training or experience in the health care field. These are all part of the team which services an average daily patient load of 15.

Senator SCHWEIKER. Fifteen?

Dr. Phillips. Yes, sir.

The clinics operate on an approximate annual budget of $325,000. Their patient load has dropped significantly in the past few months. Their earlier $32 cost per patient visit was calculated in December 1979 to be $62 per medical encounter.

Community experiences with the NHSC physicians serving in the clinic have not been good. One doctor refused to abide by the rules and bylaws of Mercy Hospital. He was disrespectful toward our Catholic sister administrator and refused to accept emergency room duties claiming that his level of training was not adequate. Review of his curriculum vitae indicated that his qualifications met acceptable levels. Later, we discovered that the doctor had applied for emergency room duties for pay at another area hospital.

The same physician did not live in town. And, for some time, he refused to have a telephone installed at his residence. Thus, he was impossible to reach after regular clinic hours. The physician did not complete his expected length of service at the clinic.

The Corps physician presently assigned in Atascosa County is a foreign medical school graduate. He is admittedly limited in his practice. The doctor does not handle obstetrics, orthopedics, or surgical cases.

Recently, the doctor took a part-time job in San Antonio. He has given notice that he will leave Atascosa County following this Corps assignment in December 1980. If there is sufficient community need for the clinic, there should be no time for a physician to entertain a part-time job.

Senator Schweiker. You cannot blame him for taking a part-time job if he only served 15 patients a day, right?

Dr. Phillips. I agree.

In nearby Cotulla, La Salle County, another RHI presents problems, but of a different nature. A Cotulla physician in private practice recently addressed our Camino Real HSA board of directors and reported that his practice was supporting a patient load of 30 per day. The RHI appeared and his patient load per day dropped to 11. He said that he was not able to maintain a practice with the RHI competition.

Senator Schweiker. Let me understand that. He was in private practice, and he served how many people a day?

Dr. Phillips. Before the RHI, he was seeing 30, which he felt comfortable.

Senator Schweiker. And the RHI moved in, and what happened?

Dr. Phillips. It dropped to 11 per day.

Shortly thereafter, the NHSC departed, also.

Senator Schweiker. He left?

Dr. Phillips. Yes, he did.

Senator Schweiker. Nobody took his place?

Dr. Phillips. No, sir.

Senator Schweiker. So neither one is there now?

Dr. Phillips. I cannot say immediately, but I believe there is not one there. They were trying to recruit one, but I do not believe they have.

The community is now less accessible to medical services than ever before. There is an attached article explaining further the

circumstances of this situation. I ask that this article become a part of the record.

Senator SCHWEIKER. We will put it in the record.

[The article referred to follows:]

NEWS

HOSPITA
CLINI

The private clinic: William Lampard, MD, poses with patients at the LaSalle Clinic in Cotulla.

A Texas tale of two clinics

Though one roof covers both, a cheap paneled wall divides two vastly different practices of medicine. The government clinic and the private medical group coexist and compete head-on in this rural South Texas town called Cotulla.

On the east side of the county-owned brick building, four private practice physicians rotate through their brightly-lighted and well-furnished offices, one each day. Their sign reads "LaSalle Hospital and Clinic," a misnomer since the hospital was closed four years ago.

Three elderly patients are waiting to see William Lampard, MD, a young Canadian family physician who came to the U.S. nearly two years ago to escape the "regimentation of bureaucracy" of Canada's socialized medicine system. Now he is getting ready to pull up stakes once again for much the same reason: government intrusion into the practice of medicine.

"If it weren't for that federal clinic over there," he told AMN, pointing to the west side of the building, "I really don't think I'd be leaving. But it has become impossible to build up a practice with that operating there."

"THAT" IS THE South Texas Rural Health Services, Inc., a community-controlled and nearly 100% federally funded clinic spawned under the government's Rural Health Initiative (RHI) program to bring care to indigent people in medically-underserved areas. Locals call it the RHI clinic.

HEW has poured nearly $500,000 into the clinic since it was created in late 1977. Last month it earmarked another $400,000 to continue the project and expand it to two satellite sites — one about 50 miles north in the town of Pearsall, where Dr. Lampard and his senior associates already have another office.

The latest HEW grant has been conditionally approved, as were all the others, despite several strange facts. The clinic has never received a certificate-of-need required by Texas law; it frequently has been without any physician; and soon will lose its current one, Horacio Ramirez, MD, a family physician.

Few lights are on in the sparsely-furnished clinic this day and a hand-lettered sign taped to the locked front door tells why: No doctor Today.

The sign is up this time, because the doctor is some 90 miles north in San Antonio, "checking on some figures" for a local Health Systems Agency board meeting that night when the group was to vote on whether to recommend a certificate-of-need for the project from the Texas Health Facilities Commission.

A native son who "picked a lot of watermelons" on his way to the U. of California, San Diego, medical school from this area that some call the watermelon capital of the world, Dr. Ramirez has stayed the longest of the clinic's itinerant physicians, serving full-time since last July. He will leave this summer, he told AMN, because he has done the job he set out to do — "get the clinic on its feet."

The Cotulla clinic has been mired in controversy since it was created.

Its defenders call it vital to meeting a pressing need for medical care in an area short on physicians and shorter still on money to pay for the services of MDs.

THEY CONTEND that private physicians — virtually none of them Mexican Americans in an area where 80% of the residents are — repeatedly have turned away poor patients, are not responsive to their needs, and charge "exhorbitant" deposits and fees for hospitalization 25 miles away at Dilley. There Dr. Lampard's senior associate, Johnny Barton, MD, a family physician, owns the small Winter Garden Hospital and the group's third office. He formerly owned LaSalle Hospital.

Many in the area, clinic proponents add, never went to any physician before the RHI opened because they knew they couldn't afford to pay and a mixture of pride and fear of rejection kept them at home for childbirth and other care. Language also has been a barrier since many patients speak only Spanish.

When major illnesses struck, some patients drove as far as 100 miles to cities like Laredo or San Antonio, where county hospitals served indigents. Others went to the private physicians, paid what they could, and "lost dignity," the clinic's proponents contend.

The pro-clinic people also criticize the local HSA and HEW for lack of support and guidance in helping establish the project — and each of these agencies criticizes the other on questions of monitoring the project and accountability for the vast dollars granted.

All sides agree that the area needs some more physicians and that most of the residents often can't afford medical care. The question is how to solve these problems.

LASALLE COUNTY has 5,500 people, with 3,746 living in Cotulla and 64% having eight or fewer years of education. During harvest times, numbers grow with migrant workers.

Median annual income for families is $4,056; 53% of county residents are classified at poverty levels; yet only about 800 individuals qualify for Medicaid.

The only MDs working in the county are the RHI's Dr. Ramirez and the Barton and Lampard group, which also includes Richard Hood, MD, a retired Air Force thoracic surgeon and family physician, and Juan Viola, MD, a family physician.

In the neighboring counties of Dimmit and Frio, where the RHI plans its satellite clinics, demographics are much the same but there are more physicians. In Frio County, where the private group's Pearsall office has been open for three years and where the RHI plans to move in, there also are three other MDs to serve the 12,000 county residents. In Dimmit County there are 13 MDs for the 11,000 residents. The RHI plans a satellite at Asherton — about 8 miles from Carrizo Springs, the city where most of these MDs practice.

Dr. Lampard and his associates view the Cotulla RHI and its expansion plans as a classic example of the pitfalls of government involvement in health care.

That clinic is "managed unbelievably incompetently and is incredibly expensive to operate," Dr. Lampard charged. "At one point, for 1978 and early 1979, it was costing about $300 per patient encounter."

He said that figure "came out when the RHI's administrator was confronted by the county commissioners' goals review committee and he reported that there had been about 3,000 patient visits. But on the official reports (to the HSA, HEW and others) they used figures like 4,000 — thereby lowering the cost per patient encounter."

Please turn to page 11

Dr. Hood

Dr. Barton

Martinez

Dr. Ramirez

Garcia

Contreras

Tale of two clinics: public and private

Continued from page 3

Dr. Lampard acknowledged that he could not explain how the $200 figure was computed, but he called the whole question of the clinic's costs a prime example of the way those operating programs can manipulate figures to make a program appear more successful.

Officials at the Camino Real Health Systems Agency at San Antonio, which has responsibility for reviewing the LaSalle program, confirmed this situation but not the figures.

According to Jose Contreras, the HSA executive director, the RHI clinic reported information that his staff used to compute a "cost per patient encounter" of $28.33 for the first quarter of 1979. By the July to September, 1979, reporting period, the figure had dropped to $22.63. HEW target figures are $16 to $24, he said — and referred AMN to his staff to find out what these figures include.

"HEW changed its formula for computation of costs per medical encounter in July of 1979," said James Munoz, HSA staff reviewer for the Cotulla clinic. "Now the figure only includes basically the MD's salary or compensation," he added, quoting a figure of $17.17 as the "cost per encounter" for the last quarter of 1979.

IN ADDITION to the formula change, he said the decreased cost also could be attributed to an increase in the number of patients seen — "1,300 medical encounters in the first quarter, up to 2,000 in the last."

Joyce Mandel, the HSA's data manager, said the HEW cost per encounter formula at one time included "all medical services fees, and related lab, x-ray, and pharmacy services.

"The new formula says to only include 'medical services costs,' which it defines as salaried medical personnel, consultants and contract services and other," she read from a complex formula code book. The new formula, as the old, does not include administrative costs and other overhead expenses, she said.

The private group's surgeon, Dr. Hood, bristles when he talks about the RHI clinic.

"Physicians can charge $10-$12 for a patient visit, which includes the doctor's overhead, supplies, taxes, personnel — and he feeds himself. Government programs apparently can only treat a patient for $50 to $300 per patient encounter. And everyone ignores the fact that the MD is paying taxes to support these programs.

"The RHI program was conceived in honesty — a noble intention of Congress to provide care for truly under-served, rural areas and truly indigent patients.

"No physician in this area says indigent patients don't need help. In the past we've all provided needed care without any type of reimbursement.

"But the RHI here was founded on false premises and has been totally inadequate and unsatisfactory. It operates with a horrendous overhead and operating costs of greater than 25% and only minimal direct patient care, less than 20% of its total budget.

"THEY SPEAK OF costs per encounter — that's everything and anything from a nurse or aide taking a blood pressure to a urinalysis, to an x-ray, to an actual office visit with the physician.

"If they'd concentrate on the indigent patients and cut the fat from their administrative budget, and leave patients who have money or third party payments to private physicians in the area," there could be room in the area for both types of practice, Dr. Hood said.

"The people who really need their care have a hard time getting in," he charged. "By preference, they're seeing so many Medicare and Medicaid patients. Others they turn away and they come and see me. These funded patients should be seen in private physicians' offices. But instead they're drawing in all the state rehabilitation patients, WICs, Community Service Agency patients, and the Migrant Worker program.

"My biggest objection is they've taken the migrant workers who are forced to go to the clinic and who might need surgery and they put pressure on them and direct them to communities 100 or 150 miles away — instead of to the local physicians who've always cared for them.

"They only refer to someone who belongs to the La Raza Unida (the Chicano political party) or has the right surname — a Latin surname. I've done no referral surgery since they opened the clinic.

"I CAN TALK TO Dr. Ramirez anytime, but not on any professional referral basis — because that doesn't happen. Relations are cordial, but there's no consultative interplay. I have a feeling it's not by his choice. I feel the administrative portion of this RHI determines the referral channels."

The RHI "has an inordinate number of employes — it's said to be 25 or so — and their salaries are grossly inflated for what they do. If a physician looked at this with his eyes wide open, he'd see that his influence would be only a small part of the operation, yet he's the one who's supposed to give the care and be responsible," said Dr. Hood, who has practiced in the area 10 years.

At their Cotulla office, he noted, the private group employs four persons in addition to the physicians and handles about 225 patients a week. "In Pearsall, we see 200 to 225 patients a week with three employes."

Dr. Hood also questions whether Cotulla truly is an "underserved" area. "What's underserved about a small community with four MDs there part-time or two full-timers? And we furnish the emergency care for the RHI patients and all other patients in this area."

Though the federal grant was given because the area was designated as a medically underserved area, Dr. Hood criticized that "they used an ancient figure and when they were called on it, they admitted it. But they never changed it" in official reports.

Dr. Hood claimed the Cotulla practice has decreased "by an honest figure of 15% of patients since the clinic began actively operating in the last year. In fairness, we'd have to say the economy of South Texas isn't booming at this time, but still most of the decline is attributed to the clinic's existence now."

Dr. Lampard told *AMN* he will leave the group this summer for a solo family practice in suburban San Antonio "because my practice ceased to grow in Cotulla one year ago and it has rapidly declined in the last two months because of the strengthening of the RHI."

THOUGH HE was seeing about 30 patients a day shortly after he arrived, he said, his daily case load is now "down to the low teens — and those who could pay for their care are going next door. The RHI operates on a sliding scale of fees and there is no great effort to prove anyone's ability to pay," he said.

Though he knew of the RHI when he joined the private group, "it was an incompetent, faltering organization. I didn't think there was anything functioning medically there that would compete with me. They'd go three weeks without a physician, then one would come along.

"Everything turned around when Dr. Ramirez came in. He's replaced the transient and sometimes questionable MDs who came through with adequate modern medical practice. And he's taken over a good portion of the administration, as well."

But even with Dr. Ramirez there, "nurses still are 'triaging' people — more like treating them and saying things like take cough medicine or two aspirin. That's what Cotulla people tell me.

"And Dr. Ramirez sends a lot of sick people to Carrizo Springs, so our Dilly hospital census is definitely lower — meaning more overhead for me indirectly."

Nevertheless, "He's a good doctor, he's there five days a week, and he's Spanish-American and talks their language, a powerful point in this area.

"But he's competing on a private practice basis from a government funded clinic."

Dr. Ramirez also is moving to San Antonio, where he plans to run an Urban Health Initiative on the city's poor South Side, teach part-time at the U. of Texas Health Science Center, and maybe private practice at some point."

He came to the Cotulla RHI and planned to stay only one year "to organize the clinic for them, get it off the ground, and recruit some physicians." His interest, he told *AMN*, is in learning and then teaching others how to set up programs for indigent patients.

When he arrived at Cotulla, "there was a whole clinic and no physician. One left without any announcement. Medical records were in shambles, there was no problem-oriented approach to care.

"There was also no communication between the clinic and the private physicians, despite the fact they were under the same roof.

"But basically it's been very easy for me to meet the doctors and they've been very receptive to me," he said. "We've had some very good understandings about what it means to take care of poor patients, and at the same time allaying their fears about taking away their paying patients.

"We've established sort of a referral system," he said, and there is "a good understanding of what kind of patients I'd like to care for and what they'd like to care for.

"Those I take cannot pay," he emphasized. "In the past year I've sent only one patient to Carrizo Springs. The out-of-county referrals to San Antonio or Laredo were for disease processes I know needed specialty care and I have no qualms whatsoever about doing that.

"It is not true the clinic doesn't check on what people can pay."

DR. RAMIREZ acknowledged that when he arrived, "our per patient encounter cost was ridiculous — I'd heard $150. Now it's down to $17.17, with a total of 6,569 patient visits — all seen by a physician.

[illegible] Lampard couldn't build a practice, [illegible] surprised. I don't believe it. If I were to establish myself in private practice, neither Lampard nor I would have trouble building a practice," he asserted.

"The main thing this clinic needs is medical personnel," said Dr. Ramirez, whose income of $45,000 is paid "through clinic income supplemented by the federal grant money to make up the difference for my compensation."

He denied that the clinic is overstaffed or employs some 20 people. "Never," he said, listing 11. The clinic's executive director, Higinio Martinez, a former administrative aide to Cotulla's mayor, told *AMN* there are 13 employes plus the physician.

However, a detailed budget submitted to HEW with the fund application lists [illegible] employe positions, including a driver, a janitor-groundskeeper, a fiscal officer, a billing clerk-bookkeeper, two billing clerk-receptionists and [illegible]

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and outreach workers, among others.

The budget, with many figures crossed out and higher ones scribbled in, was provided to *AMN* by Martinez. It also included items such as $2,500 or $3,700 for an annual CPA audit; administrative and field travel of $2,700; and $500-a-month phone expenses.

Overall, one budget version showed employe costs at $212,068 and patient care costs at $26,750. A second version listed them at $250,777 and $81,625. Dr. Ramirez referred all budget questions to Martinez, saying his concern was "providing medical care." (Martinez later referred *AMN* to the clinic's bookkeeper, who "wasn't available.")

DR. RAMIREZ called CON the clinic's major problem next to medical manpower.

"The big questions are did the HSA screw up and not tell Martinez the clinic needed CON? Or did Martinez forget it?" he said, refusing to make his bet. In general, he said "Martinez' approach (to administration) could be better."

Martinez, who was born in Cotulla told *AMN*, "People criticize our high administrative costs, but it's the only way we can comply with all the federal requirements — the strings attached to the grant," he said. "Those who say we have too many personnel don't understand the reporting requirements."

He first flatly denied the clinic was taking away patients from private MDs, then added, "If we are, the vast majority wouldn't have been paying patients anyway.

"If we are competing, it's not as much as the physicians anticipated."

"Our problems," he emphasized, "have been caused by our inability to attract National Health Service Corps physicians. It affects management. We've got goals — to open in Pearsall — and we can't because we can't find a physician. We've had people interested in coming here, but as soon as you mention joining the Corps, they say goodby."

When asked why a program with a budget of more than $300,000 a year must rely on the Corps to find and pay manpower, Martinez said, "because we don't have enough grant money to pay more than one MD."

On the certificate-of-need issue, he said he would "swear on a stack of Bibles that no one mentioned a CON to me till February of '79, after I'd already been here a year."

HOW DID THE CLINIC get funded originally without CON? "Because HEW approved it. There was a lack of coordination, a lack of people informing each other. And if you don't apply for CON to the Texas Health Facilities Commission, it doesn't know about you.

"HEW asks how often HSA people have been here. We say not once. They're out there in San Antonio and have never been here, except one man for two hours a few months ago. No one looked at our books, medical records, any systems we've set up and then they're saying we're managing the system badly when they have no idea what our system is."

Once Cotulla's mayor and now a county commissioner, Aracenio Garcia recalled the founding of the clinic. He and local politicians and "other interested people" got 400 people to a meeting to discuss "problems with our health care," he told *AMN*. The upshot of the meeting was South Texas Rural Health Services Inc., a local community-based organization that would meet new federal guidelines for receiving grants.

"The main thrust by the doctors for keeping the clinic away from here is that it replaced a federally funded migrant clinic operated by Dr. Barton. That was an additional $50,000 to $60,000 additional income for him.

[illegible] care and expansion of services to the poor and working poor. Several times we asked Dr. Barton to be our medical director, but he said if he didn't have any say-so on the board, he wouldn't participate. But he couldn't be on our board, according to our bylaws," Garcia said, ignoring the "Catch-22."

Garcia's obvious pleasure at being asked to pose for a photograph quickly turned to dismay when he saw the "no doctor" sign on the clinic's door behind him. "Let's take this down. It doesn't look good," he said.

Meanwhile, back in Dilley at his hospital, Dr. Barton stated his case.

"The need for care exists. I don't object to an RHI program that is run efficiently, properly, and is designed to get the money spent on the patients.

"But I'm very much against a program that considers the recipients last and primarily is designed to provide jobs for relatives and friends of people who initiated the proposal.

"WE HAVE PATIENTS coming in and telling us the clinic wouldn't see them, and they're as eligible as anyone else."

He denies opposing the RHI because it replaced his migrant workers health program. "Though it was a good program, it was inadequate because it only reached migrants and I felt there were an equal number of indigents residing in the area, trying their best to make ends meet and they weren't eligible because they didn't migrate." Barton said he wouldn't become involved in the clinic because "we didn't want to be associated with the group running the program. They had a bad track record, specifically problems with an HUD grant when Garcia was mayor. Several people were indicted."

What "really irritates" Dr. Barton are charges that he turns away non-paying patients. "In 20 years I'm sure I've written $1 million off the books in physician or hospital receivables. We don't turn people away." On the other hand, he added, "I've had family planning (fund) recipients come here and tell me they were strongly advised to go to that clinic and not here."

Back at the HSA's thickly-carpeted and expensively-wallpapered offices in San Antonio, Jose Contreras ponders the problems.

"As a staff, we've found a number of good strong points and some very weak points of the proposal. The strength is that the clinic was going to address a need of folks without accessibility to private care, folks who were not well-received.

"THE WEAK PART of the plan is they were trying to do too much too soon." But while HSA staff in numerous reports has recommended that the program not be funded because it has been unable to overcome its problems in manpower and management, the HSA board, often amid impassioned pleas from residents, has voted to recommend continued funding. The board also has recommended that the clinic receive a certificate of need for the complete three-county project despite the fact that the Cotulla clinic again will be in limbo when Dr. Ramirez leaves.

James Munoz, the current HSA staff reviewer of the Cotulla clinic, sees "good trends." More patients are being served, costs are going down, and the clinic "is not overstaffed. It's the nature of the beast. To run, they need enough people to keep up with the paperwork."

"We are not a police force. It's incumbent upon the clinic to find out what they need regarding CON. It's a state law and they ought to know or ask what they need. Others take the initiative. They didn't.

"HEW is responsible for monitoring and making sure patients are seen. HSAs are not into that business. Our role is planning and review. How did the clinic get funded without CON? That was HEW's decision. They decided the money care and worrying about the legality of CON and whether the clinic needed it at a later time. As it turned out, the answer was yes — and that's what the clinic was told on numerous occasions."

GERALD PHILLIPS, MD, one of the six physician-members of the Camino Real HSA board, calls the entire issue an "exercise in frustration."

"Why didn't I or the other doctors vote against the RHI? It's a political system and it would pass over my vote. Furthermore, the way the HSA boards work, if there had been a fight over the RHI and then later we'd asked for beds for our hospital, then we could expect to get turned down. You'd be cutting your own throat and the measure still would pass.

"There is a need for better medical care — that's where they have us in a bind. But it could be done cheaper. The private sector can beat the government figures any way you look at it," said Dr. Phillips, of nearby Pleasanton who was nominated to the 30-member HSA board by the Texas Medical Assn's. fifth district.

"The better method is greater involvement of local physicians. But at the present time, you do it their (the community's) way, or not at all."

HEW's regional office at Dallas has little to say about the Cotulla clinic. The newest $400,000 grant "has been approved. The award is in process, but it will need regional approval before the clinic actually gets this," said Kathryn Fritz, director of the division of health services delivery.

How has the clinic been awarded so much money in the past without any regular medical personnel? "They've been delivering services, I guess. And we don't require a full-time physician. They can have a doctor from the community come in part-time."

IS THE CLINIC improperly competing with private practice? "I'm not sure I can respond," she said, though claiming familiarity with the clinic. "That's their (local physicians') perception of it, but we have a number of patients being served by that project."

As for the clinic's operation without CON, Fritz said the organization initially was advised to get a certificate of exemption because the project was a conversion and expansion from the migrant health project. The state health facilities commission later said this was inappropriate and "both HEW and the HSA have told them to get CON, though the applicant has delayed."

The matter, however, is expected to be settled May 30, she said. The clinic has finally applied for CON, "a hearing has been waived, and the commission will decide on that date."

Back at Cotulla, *AMN* got a different message from Dr. Ramirez. "On June 6 there'll be an open hearing on CON by the THFC and if there are no objections, we expect approval."

THE BIGGEST question remains unanswered: How to get physicians for the clinic. Dr. Ramirez said he planned to meet shortly with Dr. Hood and Andrew Valencia, a physician's assistant from nearby Crystal City. The object of the meeting would be "to see how to reasonably approach the need for care for indigents here without threatening the livelihood of the private physicians and make it palatable for the community.

"We'll discuss how to get the money that's being plugged into the clinic and reorient it into private practice — restructure the arrangement so that private physicians can get reimbursed.

"I don't think anyone would have (fore) seen our present evolution of working with the private sector. Maybe we'll come to a better compromise all around," he said.

—Brenda Stone

NEWSLETTER

Compiled by the staffs of American Medical News and the AMA Newsletter.

First state medical society to surpass its 1979 AMA membership figure is South Dakota's.

On April 25, South Dakota State Medical Assn. reported 391 AMA members, an increase of about 10% over the 354 AMA members reported for all of 1979. The medical society said its own membership also is up this year and noted that its first publication of a directory of members may have resulted in greater national and state membership.

AMA's membership recruitment and retention campaign has been selected for a "Golden Trumpet Award" from the Publicity Club of Chicago.

The award cites a 16-mm film titled "What is the AMA? The AMA is You"; a membership kit called "Organized Medicine Working for You"; *AMA Highlights*, a biweekly newsletter geared to promote membership; *Federation Membership News*, which shares recruitment tips with state and county medical society executives; and a mobile van unit which brought information on Association activities to the field.

Certificate of appreciation was awarded to AMA by the American Occupational Therapy Assn. for 50 years of collaboration in the joint accreditation of occupational therapy education programs. The award, which cited the "continuing professional support of occupational therapy by the AMA," was presented at AOTA annual conference in Denver.

Three-day AMA theme meeting, "Drugs in Medical Practice," will be held Sept. 27-29 in Kansas City, Mo. Co-sponsor is American Society of Clinical Pharmacology and Therapeutics.

Six AMA regional meetings have been held this year, and seven more are scheduled. The multidisciplinary meetings will be June 13-15 in San Francisco; Sept. 12-14 in Hyannis, Mass.; Sept. 19-21 in Chicago; Oct. 17-19 in Huron, Ohio; Oct. 24-26 in Philadelphia; Nov. 14-16 in New York; and Nov. 18-19 in San Antonio.

Maternal, infant surveys planned

The National Center for Health Statistics is conducting two surveys to provide data on maternal and infant health care in the United States.

National Natality Survey and National Fetal Mortality Survey will sample mothers, physicians, hospitals and other medical sources associated with births and fetal deaths in 1980. The surveys are designed to study x-ray, ultrasound and nuclear medicine diagnosis and treatment during the year before delivery; occupational and educational characteristics of parents as they affect health; prenatal maternal health behavior and natality; delivery episode information; and postpartum health care.

Questionnaires will be mailed between June, 1980 and July, 1981. Physicians may be questioned about deliveries they attended or prenatal care provided to a particular patient. Confidentiality and privacy laws will be followed to protect rights and identity of survey participants.

Senator Schweiker. When the RHI appeared, did they survey either the planning agency or the medical profession, as to whether the services of a federally supported physician was needed in that community? What happened to that procedure?

Dr. Phillips. There was some problem in that area, Senator. In Texas the law says you need a certificate of need, but the RHI in my area and RHI in Cotulla was instituted without a certificate of need.

The Director of our HSA, for about a year and a half, asked them to get a certificate of need. It was after a period of time when they finally came before the HSA.

Senator Schweiker. They operated for a year and a half without a certificate of need?

Dr. Phillips. Possibly longer.

Senator Schweiker. Well, the system will not work if you avoid a certificate of need. That is the whole purpose.

Would they let a private practitioner get away with that?

Dr. Phillips. Well, I think there is no stipulated need for a private practitioner.

Senator Schweiker. Meaning for 18 months without getting a certificate of need?

Dr. Phillips. Well, he does not need one, but he could not practice if he were not.

In addition to these incidents, I would submit that the designation of Atascosa County as a medically underserved health——

Senator Schweiker. Why do you think the group did not apply for a certificate of need for 18 months or more?

Dr. Phillips. I assume that our Dallas office of HEW told them it was not necessary. I have to assume that. That is where they were designated from. That is where the RHI came from.

Senator Schweiker. Go ahead. Sorry to interrupt you.

Dr. Phillips. In addition to these incidents, I would submit that the designation of Atascosa County as a medically underserved health manpower shortage area is strongly suspect. The population of Atascosa County is approximately 25,000. There are nine full-time private-practice physicians, there are two others that rotate in on a half a week basis, and there is the NHSC placement. In the last 2 years, we have recruited three physicians into the county. These physicians are in private practice, they are serving the residents of Atascosa County, and have indicated to us that they will stay. Excluding the NHSC physician, the current physician-to-population ratio is 1 to 2,500. That ratio exceeds the minimum HHS standards for the designation of health manpower shortage areas—Federal Register, January 10, 1978.

There is attached to my testimony a letter from myself and Sister Joan of Arc Kalina dated December 20, 1979. The letter reaffirms the policy of Mercy Hospital of Jourdanton and its medical staff to treat all indigent persons requiring medical treatment and/or hospitalization in Atascosa County. I ask that this letter become a part of the record.

Senator Schweiker. Without objection, so ordered.

[The letter referred to follows:]

Mercy Hospital of Jourdanton
P. O. Box 189/Jourdanton, Texas 78026/(512) 769-3515

December 20, 1979

Judge Albert G. Bustamante
Bexar County Court House
Main Plaza
San Antonio, Texas 78205

Dear Judge Bustamante,

I, on behalf of the Medical Staff of Mercy Hospital of Jourdanton, would like to re-affirm our position in regards to the medical treatment of indigents within Atascosa County. Mercy Hospital of Jourdanton, which serves all of Atascosa County, will treat all indigent peoples requiring medical treatment and/or hospitalization. In addition to the hospital's agreement, our entire Medical Staff has agreed to treat these indigents on a "gratis" basis. We have agreed to treat these indigents on the existing rotation schedule; thus making the entire Medical Staff of service to these people. We have informed the Rural Health Initiative Clinic of Pleasanton/Poteet, Texas of this Staff decision. We have also informed the RHI Clinic of our intent to deliver all obstetrical patients for the set fee as established for obstetrical services rendered at Bexar Coutny Hospital.

We wish to re-affirm our position of the past, namely, that it has never been a Medical Staff or Hospital policy to refuse treatment beacuse of patient status. We feel if Bexar County would discourage these indigent patients from going to Bexar County Hospital on the pretext of "free medical services", both Counties would benefit.

We feel in offering this degree of medical services, any problems that might arise voicing our unwillingness to maintain and treat these indigents within the County might be corrected. Thus, we as a Medical Staff and Board of Directors wish to be quoted as saying, "Mercy Hospital of Jourdanton and its Medical Staff, which serves all of Atascosa County, will treat all indigent patients requiring medical treatment and/or hospitalization within our medical capabilities".

Mercy Hospital of Jourdanton
P. O. Box 189/Jourdanton, Texas 78026/(512) 769-3515

Another factor to be taken into consideration in this matter is that our Emergency Medical Services are under strain having to make runs to San Antonio with patients. Our EMS services operates on a volunteer basis, and, as they have business interest their time must be utilized in emergency services rather than transporting patients to San Antonio area hospitals.

I surely hope we can resolve these problems, allowing both Counties to be of better service to the Citizens they are entrusted to care for.

Sincerely yours,

Sister Joan of Arc
Sister Joan of Arc Kalina,
Administrator

Gerald B. Phillips M.D.
Gerald B. Phillips, M.D.
Medical Staff Member

cc: Gordon Green, M.D.
David Lopez, RHI Administrator
Camino Real, Mr. Glen Collins
Department of Human Resources
Judge O. B. Gates

Dr. **Phillips**. Mr. Chairman, you have a brief overview of the NHSC as it is working in my area. In general, it has not been cost effective and has hindered our ability to provide quality medical care in our community. In my opinion, the local medical community, hospital, and county government know our people and can care for them on a less costly basis than the RHI. We have done this in the past and would like the opportunity to provide for them in the future.

Thank you for inviting me here today. If I can respond to any questions you might have, I will be happy to do so.

Senator **Schweiker**. Dr. Phillips, you describe two different situations where Corps involvement has antagonized the private medical community, and disrupted medical care to local citizens. With respect to Atascosa County, how many Corps assignees have you had, and what happened to them?

Dr. **Phillips**. To date, we have had three. The first man stayed, and is practicing in Poteet, Tex., and I feel doing well. There was also, on the heels of him, they sent another, and then another. These two have left. One left, and one is leaving, and there is another scheduled to appear in October. We feel competing with our doctors now, as we have recruited three new doctors, also.

Senator **Schweiker**. So initially the Corps was successful in doing what it achieved with the first one, but then they insisted on staying in the area and competing with their own original assignee through an underutilized clinic which obviously is costing a lot of money. What do you think the Government plans to do now? You mentioned placing another one there?

Dr. **Phillips**. They have another Corps doctor on contract to be there in October. And even our HSA, seeing these figures on the cost per patient encounter, suggested that they either increase their encounters, or they should not be refunded. And to date, they have a $354,000 building planned in the face of that.

Senator **Schweiker**. Do I understand they were just given a grant of $200,000 for that rural health clinic?

Dr. **Phillips**. I believe so, for this year.

Senator **Schweiker**. I think you posed a classic example of what concerns me about expanding the Corps four times from what we have now. We have these problems at the 2,000 personnel level, how much will the problems increase at the 9,000 level?

First we had a success, and then turned it into a failure at Federal expense. How do you think we might avoid these situations in the future?

Dr. **Phillips**. Senator, I think the problem in our area, especially in Atascosa County, has been lack of meaningful communication with the planners. We did have one meeting, where we had the problem with the doctors, where the people from Dallas and HEW came down. But we have never had a working relation with the clinics. They have always been at odds.

It would be my suggestion that they work with the private sector, because we have treated these patients for years, and feel we can do it again. There is need, but 15 patients a day, we feel we could handle that.

Senator **Schweiker**. Thank you, Dr. Phillips. Now, Mr. Endres, would you proceed?

Mr. **Endres.** Thank you, Senator, for this opportunity to share the experiences of the San Luis Valley HMO in its efforts to integrate both private and public health care programs, and providers into a rational system of health care delivery in southern Colorado.

If it please the committee, I have filed a full report——

Senator **Schweiker.** We will put your whole report in the record. Go ahead with your summary.

Mr. **Endres.** The San Luis Valley includes six counties, with a population base of 38,400 persons. In south-central Colorado, the 8,200-square-mile area is a 7,500-foot alpine valley. The maximum dimensions are approximately 120 miles north to south and 70 miles east to west. Primarily an agricultural area, the valley is bounded on the south by New Mexico and is geographically isolated on three sides by 14,000-foot mountain ranges. The largest town is Alamosa, with about 7,000 residents. It is a 2½-hour drive, in good weather, to the next larger city of Pueblo, Colo.

The region has a strong Hispanic-American heritage. The ethnic composition is 51 percent Anglo and 48 percent Hispanic, with less than 1 percent representing all other groups. The median family income is $9,000 compared with the Colorado median of $14,000. Approximately 24 percent of the population is below poverty guidelines. Five of the six counties are designated medically underserved areas and include 97.6 percent of the population.

Health care services are provided by 38 physicians, 7 physician extenders, 4 hospitals, 16 dentists, 10 pharmacies, 4 optometrists, a public nursing system and a mental health center. Six of the physicians are office-based, and six are hospital-based specialists, most specialty care services are obtained in front range metropolitan areas.

Three physicians, three physician extenders and one dentist are National Health Service Corps personnel who practice at five sites. Most specialty health care services are obtained in front range metropolitan areas. Physician extenders are used by one private physician and at all National Health Service Corps sites.

In 1972–73, six federally supported projects had all been in existence for 2 years or more years without, I might add, integration of programs. Two community health center projects received combined Federal grants in excess of $3 million annually within the valley. There was considerable overlap in some areas of service and large areas of service deficiencies.

The Northern San Luis Valley family health services program was absorbing 85 percent to 90 percent administrative costs and providing some primary care services to about 125 individuals. The Sangre de Cristo program, in existence since 1978 with OEO funding, had administrative costs of over 75 percent and was reporting limited primary care services to about 2,400 persons. The program had 110 employees with a fleet of 35 automobiles. The Colorado Health Department of Family Planning Projects were expending approximately $200,000 annually in the valley for migrant health, family planning, and handicapped children's services. Medicare and medicaid were spending about $2.5 million annually.

At that time, a local consumer board working closely with HEW regional officials developed a strategy for integrating the Federal projects through development of an HMO. Essentially this strategy called for the HMO to become the hub of a rational health care delivery system providing an organizational and financing mechanism for both private and public sector dollars.

The HMO arranged health service through existing health resources and supported development of necessary new or restructured sites and services in a coordinated manner. Utilizing the financing available through private and public premium receipts, the HMO purchased services from both private and public sector delivery systems through contractual arrangements. This resulted in reduced administrative costs and eliminated duplicative services.

Futhermore, it provided needed revenue for projects such as National Health Service Corps and Mental Health Centers, which were attempting to attain self-sufficiency. The HMO applied for and received a community health center grant, consolidating several of the previous projects and making the full medical resources of the valley available to the recipients of grant assistance, administrative cost reductions to 15 percent provided a large increase in resources available for medical care delivery. Service levels were increased to include necessary hospitalization and services were extended to more than 4,300 eligible persons. DHEW reported savings in the first year following this change, of over $1 million, a full one-third of prior year expenditures as a result of this program integration.

The board and management determined that the future was dependent upon acceptance in all segments of our community. We resolved to develop a solid ongoing relationship with the majority of the existing physician community; to establish an acceptable program for commercial participation, as well as for Government programs; and to maximize the use of our premium dollars for improving the existing health care system.

An IPA-HMO model has been utilized because it allows for organization and provision of health services which can occur over a large geographic area with a low-population density. Likewise, an urban IPA-HMO program has effective face validity because of high cost and capitalization on the front end of development.

An IPA-HMO model also allows for the evaluation of quality care by both participating public and private physicians who participate. The interesting spinoff is that in reviewing patient care, the public sector providers learn that the problems of private sector providers are similar and vice versa. Our HMO contracts with each of these groups provides for the performance of all quality and utilization control activities on a regular basis, normally monthly.

We have found that it is essential that appropriate placement and utilization of National Health Service Corps physicians be developed around full participation of various community elements including consumers and private sector physicians.

The HMO, from its inception, began the process of integrating public and private enrollment through grant subsidized and private sector contracts. With the financial mechanisms in place, delivery was accomplished by capitation to three private physicians and one National Health Service Corps sponsor. This has grown to participation of all health care providers in the San Luis Valley, with the exception of three private practice physicians.

It has become increasingly clear in our environment, that a principal reason for lack of medical service availability was due to economic factors. However, four of our counties with smaller populations and low-population density, continue to have problems with the remoteness from medical care facilities.

For example, Conejos and Costilla Counties have one private practice physician and a small hospital to serve a total population of 10,900 persons scattered over an area of 2,481 square miles. In 1976, SLV-HMO supported development of Valley-Wide Health Services, a community corporation to sponsor National Health Service Corps providers with clinics located in the more remote communities of these two counties. The support was in the form of extensive administrative assistance, low cost rent of buildings and equipment owned by Luis Valley HMO and money loans.

In order to assure continuity of physician services and patient care, a clinic was also opened in Alamosa. Service was begun with two physicians and two physician extenders assigned by the National Health Service Corps. As patient loads increased, it was necessary to increase the physician assignments to four. Physicians and extenders rotate between the three sites providing full-time coverage in both Conejos and Costilla County. This rotation provides the patients with a choice of family doctor for nonemergency services, it provides the physicians with opportunity for peer interaction, hospital practice and choice of residence.

All of the National Health Service Corps physicians assigned to Valley-Wide are still associated with the practice. Two of the four have recently resigned from the Corps, and are continuing their services under private contract with the Valley-Wide Clinics. The corporation has repaid its loans to SLV-HMO and has purchased some of the equipment. In this manner, it has been possible for the medical care system in the San Luis Valley to be integrated in a rational way.

Financing is provided to both the private and public providers in several ways, including fee for service, private insurance, medicare, medicaid, community health center, and SLV-HMO creating equalized competition for patients.

Service delivery is provided to medically underserved areas by both private and public programs with emphasis on the use of private sector solutions. When services are not available through the private sector, public programs are used to provide necessary support and are phased out as private sector services become available.

Early in 1980, the SLV-HMO board of directors voted to begin a study of the feasibility for an expansion of its service area and operations to include the metropolitan area of Pueblo, Colo., and the rural areas surrounding that city. This action was taken in response to a group of providers in Pueblo including physicians, dentists, and pharmacists who were appointed by their respective societies to examine methods for improving their health care system and to propose innovative programs. Their research into the possibility of HMO development in their community had prompted the contact with SLV-HMO. Many of these providers have been delivering specialty care for SLV-HMO members for some time, and after a closer examination of the SLV-HMO operations, they requested our board to join them in an effort to establish an HMO either by expansion or with assistance in new development.

Concurrently, this group had voiced concerns with the current use of National Health Service Corps providers in the community and with the operations of related Federal grant programs. They were seeking alternatives which could potentially achieve a more rational and integrated system of care into the community. They have been critical of both the use of the funds and the quality of care delivered in these programs.

The feasibility study report currently being written will demonstrate the viability of the integrative model of IPA-HMO for the urban area of Pueblo, Colo.

The experience in the San Luis Valley demonstrates that, through provider and consumer involvement in the decision- and policymaking process:

One. Integration of private and public sector financing can occur in a cost-effective manner;

Two. Appropriate placement and utilization of National Health Service Corps providers can be accomplished.

I would like to emphasize that the IPA-HMO represents one model of experimentation in producing an integrated health system which we believe has validity in both rural and urban settings. Our experience does not represent a universal or complete solution. I would stress that our achievements are based on an effective management team, an involved board of directors, and a heavy helping of human relations. When these three ingredients are mixed with determination and clear goals such accomplishments are possible.

Senator **Schweiker**. Thank you, Mr. Endres.

You have got to represent one of the most unique combinations of the Health Service Corps and the private sector, as I have seen. I want to commend you as manager of the system and the HMO, and the corps for their creativeness and foresightedness in cooperating. I think it is an excellent model of how not to polarize the situation, and just the opposite of the conditions Dr. Phillips described in his backyard.

I hope that maybe it will serve to stimulate some other areas to work together on these problems rather than to fight. I think that you have set an excellent example.

I think also there is some cost-effectiveness that the Health Service Corps itself feels they can justify with that kind of an arrangement. I wonder if you would elaborate a little on that?

Mr. **Endres**. I believe the National Health Service Corps can be more cost effective due to the quality assurance programs in place through the HMO model with both the private sector and public joining together to review ambulatory care, as well as inpatient care, and doing that on a regular basis. We have established procedures where we can make it definitely more cost effective.

Senator **Schweiker**. As I understand it, two of the Service Corps physicians have actually stayed on and worked in the HMO on a private basis; is that correct?

Mr. ENDRES. That is true. Only two were assigned to the corps since the HMO has been in existence that have left the area—have not left the area, but changed to private delivery. All the corps physicians that have come are still in the area, either as a private or still public.

Senator SCHWEIKER. I think that shows perhaps when you have a joint approach, and it is not a polarized fighting situation, you can do exactly what I think the Health Service Corps was set up to do. So we really appreciate it.

Have you tried to work out an arrangement with a federally funded health center in Questa, N. Mex., Were they not as cooperative? Would you explain that a minute?

Mr. ENDRES. When we integrated the community health program, we picked up two grants that were previously community health center programs. One of the grants included an area in northern Taos County, N. Mex., the Questa Health Center. We have had the responsibility for approximately 3 years. HEW approved the arrangement. Our board has been concerned over our responsibility for accountability, and for the principle of integrating what we have applied in Colorado.

Due to State laws and requirements for large cash bonds, we are not able to operate as a prepaid plan in New Mexico. Our board has also been concerned with the fact that two-thirds of the operation is financed, but the community has had no other source of care until this past summer, until a private physician opened a practice. The subcontractor has been very threatened by this competition, and has marshaled community support against the new private practice.

Since it would be terribly expensive to become licensed in New Mexico, and we are otherwise unable to integrate the program as we have done in Colorado.

Senator SCHWEIKER. Well, I think it is a good illustration of what happens when you get one group fighting another group. I am sorry that the other community did not deal with it the way you folks did. I hope the national office will use your example as the model in some other areas for the future.

So we appreciate your appearance and testimony here very much. Thank you, Mr. Endres and Dr. Phillips, for coming today.

[The prepared statement of Mr. Endres follows:]

PRIVATE AND PUBLIC PROGRAM INTEGRATION
BY
A RURAL HMO IN THE SAN LUIS VALLEY

TO:	U.S. SENATE LABOR AND HUMAN RESOURCES SUBCOMMITTEE ON HEALTH AND SCIENTIFIC RESEARCH	PRESENTATION BY: JAMES P. ENDRES, EXECUTIVE DIRECTOR SAN LUIS VALLEY HMO, INC.

DATE: SEPTEMBER 24, 1980

SLV-HMO SERVICE AREA

THE SAN LUIS VALLEY INCLUDES SIX COUNTIES IN SOUTH CENTRAL COLORADO. THE 8,200 SQUARE MILE AREA IS A HIGH ALPINE VALLEY WITH AN AVERAGE ELEVATION OF 7,500 FEET. THE MAXIMUM DIMENSIONS ARE APPROXIMATELY 120 MILES NORTH TO SOUTH AND 70 MILES EAST TO WEST. PRIMARILY AN AGRICULTURAL AREA, THE VALLEY IS BOUNDED ON THE SOUTH BY NEW MEXICO AND IS GEOGRAPHICALLY ISOLATED ON THREE SIDES BY 14,000 FOOT MOUNTAIN RANGES. HIGHWAY ACCESS IS PROVIDED BY THREE HIGH MOUNTAIN PASSES. TWO AIR CARRIERS PROVIDE DAILY SERVICE TO DENVER, COLORADO, AND FARMINGTON, NEW MEXICO.

THERE ARE TWO TOWNS WITH POPULATIONS OF MORE THAN 5,000 PERSONS. THE LARGEST IS ALAMOSA WITH ABOUT 7,000 RESIDENTS. IT IS A 2 1/2 HOUR DRIVE, IN GOOD WEATHER, TO THE NEXT LARGER CITY OF PUEBLO, COLORADO.

THE POPULATION IS 38,400 PERSONS OR 4.7 PERSONS PER SQUARE MILE. THE MEDIAN ANNUAL FAMILY INCOME IS $9,000 COMPARED WITH THE COLORADO MEDIAN OF $14,000. ONE OUT OF EVERY SEVEN FAMILIES FALL

WITHIN THE LOWER 75TH PERCENTILE OF THE POVERTY GROUP. APPROXIMATELY 24% OF THE POPULATION IS REPORTED AS BELOW FEDERAL POVERTY GUIDELINES. MORE THAN 46% OF THE SPANISH SURNAME RESIDENTS ARE BELOW POVERTY LEVELS. THE FIGURES REPRESENT THE WORST POVERTY SITUATION IN ALL OF THE 13 COLORADO PLANNING REGIONS.

THE REGION HAS A STRONG HISPANO-AMERICAN HERITAGE. THE ETHNIC COMPOSITION IS 51% ANGLO AND 48% HISPANIC, WITH LESS THAN 1% REPRESENTING ALL OTHER GROUPS.

HEALTH CARE SERVICES ARE PROVIDED THROUGH THIRTY-EIGHT PHYSICIANS, SEVEN PHYSICIAN EXTENDERS, FOUR HOSPITALS, SIXTEEN DENTISTS, TEN PHARMACIES, FOUR OPTOMETRISTS, A PUBLIC NURSING SYSTEM, AND A MENTAL HEALTH CENTER SYSTEM.

SIX OF THE PHYSICIANS LIMIT THEIR PRACTICE TO SPECIALTIES AND SIX ARE HOSPITAL BASED. MOST SPECIALTY HEALTH CARE SERVICES ARE OBTAINED IN FRONT RANGE METROPOLITAN AREAS INCLUDING PUEBLO, COLORADO SPRINGS AND DENVER. PHYSICIAN EXTENDERS ARE USED BY ONE OF THE PRIVATE PHYSICIANS AND BY ALL THE NATIONAL HEALTH SERVICE CORPS SITES. FIVE OF THE SIX COUNTIES ARE DESIGNATED MEDICALLY UNDERSERVED AREAS AND INCLUDE 97.6% OF THE POPULATION. THREE PHYSICIANS, THREE PHYSICIAN EXTENDERS AND ONE DENTIST ARE NATIONAL HEALTH SERVICE CORPS PERSONNEL PRACTICING AT FIVE SITES.

A MORE DETAILED BREAKDOWN OF SAN LUIS VALLEY AND SLV-HMO DEMOGRAPHICS IS PROVIDED IN EXHIBIT A.

HEALTH PROGRAMS HISTORY

Prior to San Luis Valley HMO operations there were several unrelated health care programs in the Valley including:

1. Sangre de Cristo Health System - A Community Health Center project providing services at three clinics located in Conejos and Costilla Counties, Colorado and Taos County, New Mexico. Staff and facilities were furnished through federal grant funding of deficits.

2. Northern San Luis Valley Family Health Services - A Community Health Center project that provided services in Saguache County through fee-for-service purchase at four private physicians offices. A federal grant covered administration and service costs.

3. Saguache Community Clinics - A county-supported sponsor of National Health Service Corps personnel including one physician, two physician extenders, and one dentist. Services were delivered at two clinics in small Saguache County communities.

4. San Luis Valley Comprehensive Community Mental Health Center - A provider of mental health, alcoholism and drug abuse services through federal grant financing of deficits for six delivery sites, one in each county.

5. Rocky Mountain Planned Parenthood - A family planning

program in Alamosa serving the six counties with private funding and a small portion of a statewide federal grant.

6. The Colorado Health Department - Programs for Migrant Health, Handicapped Children, and assistance to the Public Health Nursing system with statewide federal grants to purchase or provide services.

In 1972-73, these federally-supported projects had all been in existence for two years or more. The two Community Health Center projects received combined federal grants in excess of $3.0 million annually. Each project had its own Board of Directors and staff. No relationship whatsoever existed between any of the programs. There was considerable overlap in some areas of service and large areas of service deficiencies.

The Northern San Luis Valley Family Health Services program was absorbing 85 to 90% administrative costs and providing some primary care services to 125 individuals. The Sangre de Cristo program, in existence since 1968 with OEO funding had administrative costs of over 75% and was reporting limited primary care services to about 2,400 persons. The program had 110 employees with a fleet of 35 automobiles. The Mental Health Center and Saguache Clinics were reported by the DHEW Regional Office to be operating with acceptable overhead costs. The Colorado Health Department and Family Planning Projects had expended approximately $200,000 in the area for migrant health, family planning and handicapped children services.

A RURAL HMO

IN ADDITION TO THE GRANT PROJECTS, THE MEDICARE AND MEDICAID PROGRAMS HAD PAID OUT MORE THAN $2.5 MILLION ANNUALLY FOR MEDICAL, HOSPITAL, AND NURSING HOME CLAIMS IN THE VALLEY.

NUMEROUS COMPLAINTS FROM LOCAL RESIDENTS, STATE AND LOCAL OFFICIALS EVIDENCED DISCONTENT AND CONCERN OVER THE HIGH COST, LOW SERVICE RESULTS OF THESE PROJECTS.

SLV-HMO HISTORY

A LOCAL CONSUMER BOARD WORKING CLOSELY WITH HEW REGIONAL OFFICIALS DEVELOPED A STRATEGY FOR INTEGRATING THE FEDERAL PROJECTS THROUGH DEVELOPMENT OF AN HMO. ESSENTIALLY THIS STRATEGY CALLED FOR THE HMO TO BECOME THE HUB OF A RATIONAL HEALTH CARE DELIVERY SYSTEM PROVIDING AN ORGANIZATIONAL AND FINANCING MECHANISM FOR BOTH PRIVATE AND PUBLIC SECTOR DOLLARS. THE HMO ARRANGED HEALTH SERVICES THROUGH EXISTING HEALTH RESOURCES AND SUPPORTED DEVELOPMENT OF NECESSARY NEW OR RESTRUCTURED SITES AND SERVICES IN A COORDINATED MANNER. UTILIZING THE FINANCING AVAILABLE THROUGH PRIVATE AND PUBLIC PREMIUM RECEIPTS, THE HMO PURCHASED SERVICES FROM BOTH PRIVATE AND PUBLIC SECTOR DELIVERY SYSTEMS THROUGH CONTRACTUAL ARRANGEMENTS. THIS RESULTED IN REDUCED ADMINISTRATIVE COSTS AND ELIMINATED DUPLICATION OF SERVICES. FURTHERMORE, IT PROVIDED NEEDED REVENUE FOR PROJECTS SUCH AS NATIONAL HEALTH SERVICE CORPS AND MENTAL HEALTH CENTERS, WHICH WERE ATTEMPTING TO ATTAIN SELF-SUFFICIENCY.

A RURAL HMO

The San Luis Valley Health Maintenance Organization, Inc. was first incorporated in 1972 and began operations on May 1, 1975 with 574 members as a State Licensed HMO. SLV-HMO became federally qualified on December 26, 1978. During more than five years of operations, SLV-HMO has enjoyed steady growth in all segments of the marketplace. Current enrollment is 8,585 members (September 1, 1980) which is 22.6% of the total population. The enrollment is broadly representative and is in the near proportion to the total population distribution and demographic factors throughout the six county service area.

The current membership of SLV-HMO is drawn from five major areas including:

Employer Groups,

Direct Pay,

Community Health Center,

Medicaid, and

Medicare Supplements

The employer groups in our service area have been extremely receptive to the HMO alternative. Currently we have 97 group contracts representing 2,780 members or 32% of our total enrollment.

Our direct pay program is available to all residents of the Valley. Enrollment is restricted to families and individuals who

ARE ABLE TO PASS A MEDICAL SCREENING FOR AVERAGE GOOD HEALTH. THIS PROGRAM INCLUDES 763 MEMBERS OR 9% OF THE ENROLLMENT.

THE COMMUNITY HEALTH CENTER PROGRAM PROVIDES 4,094 PERSONS WITH ENROLLMENT IN THE HMO THROUGH A FEDERAL GRANT TO ASSIST IN PREMIUM PAYMENT FOR LOW-INCOME, NON-MEDICAID PERSONS. THE AVERAGE FAMILY ENROLLED IN THIS GROUP PAYS 17% OF THE REQUIRED PREMIUM. THIS GROUP CURRENTLY CONSISTUTES 47% OF OUR ENROLLMENT.

A CONTRACT WITH THE COLORADO DEPARTMENT OF SOCIAL SERVICES PROVIDES FOR THE VOLUNTARY ENROLLMENT OF MEDICAID RECIPIENTS ON A PREPAID BASIS. THE MEDICAID RECIPIENT CHOOSING TO ENROLL IN THE HMO RECEIVES HEALTH CARE IN THE SAME MANNER AS OTHER HMO MEMBERS. THIS GROUP ACCOUNTS FOR 536 MEMBERS OR 6% OF OUR ENROLLMENT.

THE BALANCE OF OUR MEMBERSHIP, CONSISTING OF 513 PERSONS OR 6%, IS ENROLLED IN OUR MEDICARE SUPPLEMENT PROGRAM THROUGH ALL OF THE PREVIOUSLY MENTIONED GROUPS.

THE ENROLLMENT IN OUR PLAN IS NOT COMMON TO USUAL HMO ENROLLMENT. THE COMMUNITY HEALTH CENTER PROGRAM IS CONTINUOUSLY AVAILABLE ON AN OPEN ENROLLMENT BASIS, WITHOUT REGARD TO HEALTH STATUS. EMPLOYER GROUPS IN OUR SERVICE AREA ARE EXTREMELY SMALL, AVERAGING LESS THAN 12 EMPLOYEES. A STRONG POTENTIAL FOR ADVERSE SELECTION IS EXISTENT IN THE MAJORITY OF OUR MARKETPLACE.

INITIAL EFFORTS TOWARD HMO DEVELOPMENT WERE CENTERED AROUND THE GOVERNMENT FUNDED CLINIC OPERATIONS ADDING TO THE CONTROVERSY OF BOTH THE FAMILY HEALTH CENTERS AND THE HMO. SOME OF THE HMO

A RURAL HMO

PLANNERS ENVISIONED DEVELOPMENT OF THESE CLINICS INTO A STAFF OR GROUP PRACTICE HMO. IN 1975 SLV-HMO ENTERED INTO A CONTRACT WITH THE NORTHERN SAN LUIS VALLEY FAMILY HEALTH CENTER PROGRAM TO PROVIDE SERVICES TO ELIGIBLE PERSONS. THESE PERSONS WERE ENROLLED IN THE HMO WITH ALL OR PART OF THEIR PREMIUMS PAID BY FEDERAL GRANT FUNDS. VIRTUALLY ALL OF THE INITIAL HMO ENROLLMENT WAS THROUGH THIS GRANT SUBSIDIZED CONTRACT. DELIVERY WAS ACCOMPLISHED THROUGH A STRICT CAPITATION TO THREE PRIVATE PHYSICIANS AND ONE NATIONAL HEALTH SERVICE CORPS PHYSICIAN SPONSOR. SERVICE WAS BEING DELIVERED BUT COMMUNITY SUPPORT FROM BOTH PROVIDERS AND CONSUMERS WAS SORELY LACKING.

SLV-HMO WAS REORGANIZED IN 1976 WITH RENEWED EMPHASIS PLACED ON INTEGRATION OF GOVERNMENT HEALTH PROGRAMS INTO THE ESTABLISHED PRIVATE SECTOR HEALTH CARE DELIVERY SYSTEM. THIS REORGANIZATION WAS PREDICATED ON A REALISTIC REVIEW OF OUR COMMUNITY NEEDS, RESOURCES AND POSSIBILITIES. THE BOARD AND MANAGEMENT DETERMINED THAT THE FUTURE WAS DEPENDENT UPON ACCEPTANCE IN ALL SEGMENTS OF OUR COMMUNITY. WE RESOLVED TO DEVELOP A SOLID ONGOING RELATIONSHIP WITH A MAJORITY OF THE EXISTING PHYSICIAN COMMUNITY; TO ESTABLISH AN ACCEPTABLE PROGRAM FOR COMMERCIAL PARTICIPATION AS WELL AS FOR GOVERNMENT PROGRAMS; AND TO MAXIMIZE THE USE OF OUR PREMIUM DOLLARS FOR IMPROVING THE EXISTING HEALTH CARE SYSTEM.

THIS ASSESSMENT WAS BASED ON THE DETERMINATION THAT A STAFF OR GROUP PRACTICE MODEL HMO COULD NOT ORGANIZE IN AN EFFECTIVE AND EFFICIENT MANNER TO PROVIDE SERVICES OVER SUCH A LARGE LOW

POPULATION AREA. A STAFF OR GROUP PRACTICE WOULD TEND TO DILUTE THE AVAILABLE MARKET IN A WAY THAT WOULD JEOPARDIZE ALL MEDICAL DELIVERY IN THE AREA. IT WOULD ALSO CONTINUE TO ENCOUNTER STRONG RESISTANCE IN BOTH THE CONSUMER AND PROVIDER COMMUNITY.

THIS WAS THE MOST IMPORTANT DECISION POINT IN OUR DEVELOPMENT. ONCE IT WAS MADE WE WERE ABLE TO PROCEDE ON THE BASIS OF THE INDIVIDUAL PRACTICE ASSOCIATION MODEL. MANY MEETINGS WERE HELD WITH PHYSICIANS AND VIRTUALLY ALL OTHER HEALTH CARE PROVIDERS INCLUDING BOTH PRIVATE AND PUBLIC ENTITIES. PLANS AND INTENTS WERE FULLY AND OPENLY DISCUSSED DESCRIBING THE POSSIBILITIES FOR ORGANIZATIONAL STRUCTURE AND REIMBURSEMENT MECHANISMS. THE PLAN USED THIS COMMUNITY INVOLVEMENT TO ESTABLISH THE FRAMEWORK FOR CONTINUED OPERATIONS.

AN IPA-HMO MODEL ALSO ALLOWS FOR THE EVALUATION OF QUALITY CARE BY BOTH PUBLIC AND PRIVATE PHYSICIANS WHO PARTICIPATE. THE INTERESTING SPIN-OFF IS THAT IN DISCUSSING PATIENT CARE, THE PUBLIC SECTOR PROVIDERS LEARN THAT THE PROBLEMS OF PRIVATE SECTOR PROVIDERS ARE SIMILAR AND VICE-VERSA. OUR HMO CONTRACTS WITH EACH OF THESE GROUPS AND PROVIDES FOR THE PERFORMANCE OF ALL QUALITY AND UTILIZATION CONTROL ACTIVITIES ON A REGULAR BASIS (MONTHLY).

THEREFORE, IT IS ESSENTIAL THAT APPROPRIATE PLACEMENT AND UTILIZATION OF NHSC PHYSICIANS BE DEVELOPED AROUND FULL PARTICIPATION OF VARIOUS COMMUNITY ELEMENTS INCLUDING CONSUMERS AND PRIVATE SECTOR PHYSICIANS.

A RURAL HMO

THE HMO APPLIED FOR AND RECEIVED A COMMUNITY HEALTH CENTER GRANT, CONSOLIDATING SEVERAL OF THE PREVIOUS PROJECTS AND MAKING THE FULL MEDICAL RESOURCES OF THE VALLEY AVAILABLE TO THE RECIPIENTS OF GRANT ASSISTANCE. ADMINISTRATIVE COST REDUCTIONS TO 15% PROVIDED A LARGE INCREASE IN MEDICAL CARE DELIVERY. SERVICE LEVELS WERE INCREASED TO INCLUDE NECESSARY HOSPITALIZATIONS AND SERVICES WERE EXTENDED TO MORE THAN 4,300 ELIGIBLE PERSONS. DHEW, REPORTED SAVINGS IN THE FIRST YEAR OF OVER ONE MILLION DOLLARS, A FULL ONE-THIRD OF PRIOR YEAR EXPENDITURES AS A RESULT OF THIS PROGRAM INTEGRATION.

PERHAPS THE MOST IMPORTANT ACHIEVEMENT WAS THE INTEGRATION OF ALL HEALTH CARE DELIVERY INTO A SINGLE SYSTEM. THE ATTEMPT TO RESOLVE THE MEDICALLY UNDERSERVED PROBLEM THROUGH ESTABLISHMENT OF CLINICS IN DIRECT COMPETITION WITH THE PRIVATE SECTOR DIVIDED THE AVAILABLE MARKET AND DECREASED THE MEDICAL RESOURCES AVAILABLE TO THE COMMUNITY. IT HAS BECOME INCREASING CLEAR IN OUR ENVIRONMENT THAT A PRINCIPLE REASON FOR LACK OF MEDICAL SERVICE AVAILABILITY WAS DUE TO ECONOMIC FACTORS. HOWEVER, FOUR OF OUR COUNTIES WITH SMALLER POPULATIONS AND LOW POPULATION DENSITIES CONTINUE TO HAVE PROBLEMS WITH REMOTENESS FROM MEDICAL CARE FACILITIES.

SAGUACHE COUNTY WITH A POPULATION OF 4,000 HAS RESOLVED THE PROBLEM BY CONTINUATION OF NATIONAL HEALTH SERVICE CORPS PROVIDERS. COMBINED WITH SLV-HMO PARTICIPATION AND A PRIVATE PHYSICIAN, FINANCING OF THEIR CLINICS IS MARGINALLY ADEQUATE AND ADDITIONAL GRANT SUPPORT HAS NOT BEEN REQUIRED.

A RURAL HMO

Mineral county receives physician services for emergencies and minor outpatient needs from a part-time retired private physician. More than 550 of the 800 persons in Mineral county reside in Creede which is 39 miles from the nearest hospital and full medical service facility. A major mining impact in the community is anticipated to both aggravate and provide the necessary population and financing to solve the problem.

Conejos and Costilla counties have one private practice physician and a small hospital to serve a total population of 10,900 persons scattered over 2,481 square miles. In 1975, SLV-HMO supported development of Valley Wide Health Services, a community corporation to sponsor National Health Service Corps providers with Clinics located in the more remote communities of these two counties. This support was in the form of extensive administrative assistance, low cost rent of buildings and equipment owned by SLV-HMO and money loans. In order to assure contiuity of physician services and patient care, a clinic was also opened in Alamosa. Service was begun with two physicians and two physician extenders assigned by the Corps. As patient loads increased it was necessary to increase the physicians assigned to four. The physicians and extenders rotate between the three sites providing full time equivalents in both Conejos and Costilla county. This rotation provides the patients with a choice of family doctor for non-emergency services. It provides the physicians with opportunity for peer interaction, hospital practice and choice of residence. All of the National Health

A RURAL HMO

Service Corps physicians assigned to Valley Wide are still associated with the practice. Two of the four have recently resigned the Corps and are continuing their services under private contract with the Valley-Wide clinics. The corporation has repaid its loans to SLV-HMO and has purchased some of the equipment.

In this manner it has been possible for the medical system in the San Luis Valley to be integrated in a rational way.

Financing is provided to both the private and public providers in several ways including fee-for-sevice, private insurance, Medicare, Medicaid and SLV-HMO.

Service delivery is provided to Medically Underserved Areas by both private and public programs with emphasis on the use of private sector solutions. When services are not available through the private sector, public programs are used to provide necessary support and are phased out as private sector services become available.

SLV-HMO ORGANIZATION

THE HMO BOARD OF DIRECTORS, COMPOSED OF 18 PERSONS, INCLUDES BANKERS, FARMERS, BUSINESS PERSONS, GOVERNMENT EMPLOYEES, LOW-INCOME PERSONS AND PROVIDERS. IT IS BROADLY REPRESENTATIVE OF THE COMMUNITY AND OF THE ENROLLMENT. CONSUMER DOMINATED, IT IS EXTREMELY ACTIVE, AND IS A POSITIVE COORDINATING ENTITY SEEKING THE APPROPRIATE BALANCE WITH BOTH PROVIDER AND CONSUMER.

PHYSICIANS ARE ORGANIZED IN A SEPARATE CORPORATION CONTRACTING WITH THE HMO FOR DELIVERY OF ALL PROFESSIONAL MEDICAL SERVICES TO ENROLLED MEMBERS. SLV-HMO CONTRACTS WITH THIS CORPORATION ON THE BASIS OF A CAPITATED MONTHLY PAYMENT. A SUBCONTRACT WITH MEMBER PHYSICIANS OR THEIR SPONSORS PROVIDE FOR PAYMENT ON THE BASIS OF A NEGOTIATED FEE-FOR-SERVICE RATE WITH A LIMITED RISK-SHARING HOLDBACK. THE CONTRACTS ALSO PROVIDE FOR THE PERFORMANCE OF ALL QUALITY ASSURANCE AND UTILIZATION CONTROL ACTIVITIES THROUGH A FORMAL PEER REVIEW SYSTEM. THE PHYSICIAN CORPORATION OR IPA SELECTS ITS OWN MEMBERSHIP. PARTICIPATING PHYSICIANS OF THE HMO MUST BE MEMBER PHYSICIANS OF THE IPA.

CURRENTLY 29 OF THE 32 PHYSICIANS IN PRACTICE INCLUDING ALL OF THE NATIONAL HEALTH SERVICE CORPS ASSIGNEES THROUGHOUT OUR SERVICE AREA ARE MEMBER PHYSICIANS OF THE IPA AND PARTICIPATE WITH THE PLAN. ALL OF THE AREA DENTISTS, THE PHARMACIES, THE HOSPITALS AND OTHER HEALTH CARE PROVIDERS ARE PARTICIPATING.

THE IPA BOARD OF DIRECTORS IS COMPOSED OF FIVE MEMBER

PHYSICIANS ELECTED BY THE IPA MEMBERSHIP. THE PHYSICIAN BOARD APPOINTS FIVE OTHER MEMBER PHYSICIANS TO SERVE ON THE PEER REVIEW COMMITTEE. BOTH PANELS MEET MONTHLY. ALL ISSUES RELATED TO THE HMO MEDICAL SERVICE DELIVERY ARE SUBJECT TO REVIEW, AND DETERMINATION BY THESE BOARDS INCLUDING CLINICAL GRIEVANCES FILED BY HMO ENROLLEES.

THE IPA ARRANGES FOR ALL NECESSARY SPECIALTY CARE THROUGH SUBCONTRACT OR WRITTEN REFERRAL ARRANGEMENTS. MENTAL HEALTH SERVICES, HOME HEATH AND OTHER TYPES OF SERVICES ARE SUBCONTRACTED BY THE IPA. ALL SUCH SERVICES ARE SUBJECTED QUALITY ASSURANCE AND UTILIZATION CONTROL REVIEWS BY THE IPA. ONE OF THE MOST IMPORTANT FEATURES OF OUR ORGANIZATION IS THIS INTEGRATION OF PEER REVIEW AND DECISION MAKING INVOLVING BOTH PRIVATE AND PUBLIC SECTOR PROVIDERS ACTING TOGETHER TO IMPROVE THE SYSTEM. IT WAS HIGHLY RESISTED AT FIRST BUT HAS BECOME A ROUTINE ACCEPTED BY ALL.

WE HAVE DELIBERATELY ATTEMPTED TO BASE OUR OPERATION ON INFORMED, PERHAPS CAUTIOUS, DEVELOPMENT. CHANGES AND NEW ACTIVITIES ARE APPROACHED WITH CONSIDERABLE STAFF REVIEW AND CONSTANT INTERACTION WITH PHYSICIANS AND OTHER APPROPRIATE PROVIDERS AS WELL AS CONSUMERS.

EXPANSION ACTIVITIES

EARLY IN 1980, THE SLV-HMO BOARD OF DIRECTORS VOTED TO BEGIN A STUDY OF THE FEASIBILITY FOR AN EXPANSION OF ITS SERVICE AREA AND OPERATIONS TO INCLUDE THE METROPOLITAN AREA OF PUEBLO.

Colorado and the rural areas surrounding that city. This action was taken in response to a group of providers in Pueblo including physicians, dentists, and pharmacists who were appointed by their respective societies to examine methods for improving their health care system and to propose inovative programs. Their research into the possibility of HMO development in their community had prompted the contact with SLV-HMO. Many of these providers have been delivering specialty care for SLV-HMO members for some time and after a closer examination of the SLV-HMO operations, they requested our Board to join them in an effort to establish an HMO either by expansion or with assistance in new development.

Concurrently, this group had voiced concerns with the current use of National Health Service Corps providers in the community and with the operations of related federal grant programs. They were seeking alternatives which could potentially achieve a more rational and integrated system of care into the community. They have been critical of both the use of the funds and of the quality of care delivered in these programs.

The expansion activities of SLV-HMO represent efforts to examine more closely our premise that the integrated IPA-HMO model is, in fact, a valid approach in urban as well as rural settings.

The feasibility study report currently being written will demonstrate the viability of the integrative model of IPA-HMO for

THE URBAN AREA OF PUEBLO, COLORADO.

THE EXPERIENCE IN THE SAN LUIS VALLEY DEMONSTRATES THAT, THROUGH PROVIDER AND CONSUMER INVOLVEMENT IN THE DECISION AND POLICY-MAKING PROCESS:

1) INTEGRATION OF PRIVATE AND PUBLIC SECTOR FINANCING CAN OCCUR IN A COST-EFFECTIVE MANNER;

2) APPROPRIATE PLACEMENT AND UTILIZATION OF NATIONAL HEALTH SERVICE CORPS PROVIDERS CAN BE ACCOMPLISHED.

I WOULD LIKE TO EMPHASIZE THAT THE IPA-HMO REPRESENTS ONE MODEL OF EXPERIMENTATION IN PRODUCING AN INTEGRATED HEALTH SYSTEM WHICH WE BELIEVE HAS VALIDITY IN BOTH RURAL AND URBAN SETTINGS. OUR EXPERIENCE DOES NOT REPRESENT A UNIVERSAL OR COMPLETE SOLUTION. I WOULD STRESS THAT OUR ACHIEVEMENTS ARE BASED ON AN EFFECTIVE MANAGEMENT TEAM, AN INVOLVED BOARD OF DIRECTORS, AND A HEAVY HELPING OF HUMAN RELATIONS. WHEN THESE THREE INGREDIENTS ARE MIXED WITH DETERMINATION AND A CLEAR GOAL, SUCH ACCOMPLISHMENTS BECOME MORE REALISTIC.

EXHIBIT A

Selected Service Area Demographics

and

Monthly Enrollment History

San Luis Valley health maintenance Organization, inc.
216 Victoria Avenue - Alamosa, Colorado 81101

SAN LUIS VALLEY HEALTH MAINTENANCE ORGANIZATION, INC.

Service Area Demographics
September 1, 1980

The San Luis Valley includes all of the six counties of Alamosa, Conejos, Costilla, Mineral, Saguache, and Rio Grande in south-central Colorado. (Colorado Planning and Management Region 8).

Service Area includes:

8,180 square miles
38,400 total population (1978 estimate)
48.74% Minority (Spanish surname & non-white)
23.90% Poverty

	Land Area	Families	Population	Minority %	Poverty %
Alamosa	719	3,290	12,000	34.32	18.1
Conejos	1,268	2,150	7,900	67.59	36.7
Costilla	1,213	930	3,000	80.76	33.8
Mineral	921	210	800	2.42	11.1
Rio Grande	915	2,980	10,700	45.97	16.8
Saguache	3,144	1,100	4,000	47.42	32.0
Total	8,180	10,660	38,400	48.74 %	23.9 %

7,259 square miles or 88.7% of land area is medically underserved.

37,479 persons or 97.6% of population is medically underserved.

10,900 persons or 28.4% of population is Critical Medical Manpower Shortage Area. (Less than 1 physician/3,500 population)

2,481 square miles or 30% of land area is Critical Medical Manpower Shortage Area.

29.1% of the residents live in rural areas of more than 2,500 population.

70.9% of the residents live in rural areas of less than 2,500 population.

The City of Alamosa has approximately 6,985 population and is the largest city within a 2 1/2 hour drive (Santa Fe, New Mexico, or Pueblo, Colorado).

A high alpine valley with an average elevation of 7,500 feet above sea level, the San Luis Valley is geographically isolated on three sides by 14,000 foot mountain ranges with highway access by three high mountain passes and two air carriers providing daily service to Denver, Colorado and Farmington, New Mexico.

SLV-HMO Enrollment - 8,686 = 22.6% of total population (September 1, 1980)

Revised 9-22-80

POPULATION DISTRIBUTION *

	Medically Underserved Area (1)	Rural (2) Population	Non-Metro Population	Total Population
Colorado		572,021	871,000	2,664,000
Alamosa	12,000	5,015	12,000	12,000
Conejos	7,900	7,900	7,900	7,900
Costilla	3,000	3,000	3,000	3,000
Mineral	-0-	800	800	800
Rio Grande	10,700	6,971	10,700	10,700
Saguache	4,000	4,000	4,000	4,000
Total	37,600	27,686	38,400	38,400

(1) The Medically Underserved Areas list was published in the "Notices" section of the Federal Register on October 15, 1976. An updated list, dated December 1977, was provided to SLV-HMO and verified to be current by DHEW Region VIII on October 15, 1979.

(2) Places under 2,500 person population.

POPULATION AND POPULATION DENSITY IN RANK ORDER - 1978 *

	Population	Rank	Density	Rank
Colorado	2,664,000	--	25.7	-
Alamosa	12,000	25	16.7	15
Rio Grande	10,700	27	11.7	22
Conejos	7,900	33	6.2	33
Saguache	4,000	48	1.3	58
Costilla	3,000	52	2.5	47
Mineral	800	61	0.9	62
Total	38,400	12	4.7	12

Density = Average number of person per square mile

NOTE: Rank by county is based on 63 Colorado counties.
Rank for total (region) is based on 13 Colorado regions.

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* Population estimates are from "Colorado Demographic Profiles - 1978" Colorado Department of Health, Health Statistics Section, publication dated August 24, 1979, unless otherwise noted.

EMPLOYMENT

	Number * Families	Employed Persons	Federal Employees	Percent * Unemployment
Colorado	669,781	920,811	48,779	5.1
Alamosa	3,290	3,054	93	6.2
Conejos	2,150	829	20	9.7
Costilla	930	204	14	14.1
Mineral	210	206	3	2.5
Rio Grande	2,980	2,545	124	5.7
Saguache	1,100	410	19	6.8
Total	10,660	7,248	273	7.0

Derived from "County Business Patterns" 1978 -- Colorado; U.S. Department of Commerce, Bureau of Census -- does not include government or railroad employees, or self-employed persons; civilian federal employees are estimated separately.

LOW-INCOME, MEDICAID

	Families Below Poverty Level *	Medicaid (1)
Colorado	49,850	118,806
Alamosa	479	906
Conejos	637	1,103
Costilla	228	556
Mineral	27	17
Rio Grande	437	985
Saguache	305	419
Total	2,113	3,986

(1) Actual number of persons receiving Colorado Medicaid assistance in January 1980 as reported by the Colorado Department of Social Services.

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* Population estimates are from "Colorado Demographic Profiles - 1978" of Health, Health Statistics Section, publication dated August 24, 1979, unles otherwise noted.

RACIAL/ETHNIC DISTRIBUTION

NUMBER

	(1) White	Hispanic	Black	Indian	Asian	(2) Other	Total
Colorado	2,162,068	364,097	100,727	12,499	24,717	(108)	2,664,000
Alamosa	7,876	3,956	45	31	91	1	12,000
Conejos	2,563	5,302	4	4	28	(1)	7,900
Costilla	577	2,377	1	-0-	45	-0-	3,000
Mineral	781	19	-0-	-0-	-0-	-0-	800
Rio Grande	5,782	4,872	14	12	21	(1)	10,700
Saguache	2,103	1,846	24	20	7	-0-	4,000
Total	19,682	18,372	88	67	192	(2)	38,400

PERCENT

	(1) White	Hispanic	Black	Indian	Asian	(2) Other	Total
Colorado	81.13	13.67	3.78	.47	.93	.02	100.02
Alamosa	65.63	32.97	.33	.26	.76	.05	99.95
Conejos	32.44	67.12	.05	.05	.36	(.02)	100.02
Costilla	19.24	79.24	.03	.00	1.49	N/A	100.00
Mineral	97.58	2.42	.00	.00	.00	N/A	100.00
Rio Grande	54.03	45.53	.13	.11	.20	N/A	100.00
Saguache	52.58	46.14	.61	.50	.17	N/A	100.00
Total	51.26	47.84	.23	.17	.50	N/A	100.00

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* Population estimates are from "Colorado Demographic Profiles - 1978" of Health, Health Statistics Section, publication dated August 24, 1979, unless otherwise noted.

(1) For purpose of this display "White" does not include the Hispanic numbers which are normally included as White in population demographics. For purposes of comparisons with other demographic studies, the "White" and "Hispanic" columns (1 & 2) should be added together.

(2) This column is used for adjustment of rounding errors - - The State of Colorado does not report any persons in "Other" category.

Revised 9-22-80

LOW-INCOME ELIGIBILITY ANALYSIS POVERTY DEMOGRAPHICS

County	1 Recipients Medicaid	2 Recipients CHC	3 Total Receiving Assistance	4 CHC Waiting List	5 Total Identified Below Poverty
		AGES 64 AND UNDER			
Alamosa	616	722	1,338	426	1,764
Conejos	604	1,850	2,454	123	2,577
Costilla	250	663	913	73	986
Mineral	8	2	10	-0-	10
Rio Grande	574	750	1,324	236	1,560
Saguache	253	359	612	56	668
Total	2,295	4,346	6,641	914	7,555
		AGES 65 AND OVER			
Alamosa	290	59	349	59	408
Conejos	499	160	659	99	758
Costilla	316	47	363	44	407
Mineral	9	-0-	9	1	10
Rio Grande	411	66	477	47	524
Saguache	166	23	199	19	208
Total	1,691	355	2,046	269	2,315
		ALL AGES			
Alamosa	906	781	1,687	485	2,172
Conejos	1,103	2,010	3,113	222	3,335
Costilla	556	710	1,266	117	1,383
Mineral	17	2	19	1	20
Rio Grande	985	816	1,801	283	2,084
Saguache	419	382	801	75	876
Total	3,986	4,701	8,687	1,183	9,850

1 = 1/3/80 Colorado Department of Social Services (actual)
2 = 1/1/80 SLV-HMO CHC Enrollment (actual)
3 = Columns 1 plus 2
4 = 1/24/80 SLV-HMO CHC Waiting List (actual)
5 = Columns 3 plus 4

Please note in (Ages 65 and Over) - In Costilla county the number of eligibles below poverty level exceeds the total over age 65 population defined in Colorado Management and Planning - District 8 - Demographic profile. SLV-HMO has made a very comprehensive analysis of this age group and feels that the District 8 Demographic profile contains a significant error. The identified individuals in this table are updated monthly.

POVERTY ASSISTANCE ANALYSIS SUMMARY
(see previous page for detail)

	Medicaid Recipients		CHC Recipients		Unserved Eligible	
	Total	%	Total	%	Total	%
Alamosa	906	7.6	781	6.5	485	4.0
Conejos	1,103	14.0	2,010	25.4	222	2.8
Costilla	556	18.5	710	23.7	117	3.9
Mineral	17	2.1	2	0.3	1	0.1
Rio Grande	985	9.2	816	7.6	283	2.6
Saguache	419	10.5	382	9.6	75	1.9
Total	3,986	10.4	4,701	12.2	1,183	3.1

SLV-HMO CORRECTED ANALYSIS OF POVERTY LEVELS

	Total Population	Total Below Poverty	Percent Poverty
Alamosa	12,000	2,172	18.1
Conejos	7,900	3,335	42.2
Costilla	3,000	1,383	46.1
Mineral	800	20	2.5
Rio Grande	10,700	2,084	19.5
Saguache	4,000	876	21.9
Total	38,400	9,850	25.7

HEALTH CARE PROVIDERS

	Physicians	Physician Extenders	Registered Nurses
Colorado	4,643		12,586
Alamosa	23	3	46
Conejos	2	2	11
Costilla	-0-	-0-	3
Mineral	1	-0-	1
Rio Grande	10	1	32
Saguache	2	1	10
Total	38	7	104

	Dentists	Pharmacists Sites	Pharmacists (Providers)	Optometrists
Colorado				
Alamosa	5	3		2
Conejos	2	2	Not Available	-0-
Costilla	1	-0-		-0-
Mineral	-0-	-0-		-0-
Rio Grande	7	4		2
Saguache	1	1		-0-
Total	16	10		4

HEALTH CARE FACILITIES

	Hospitals	(Beds)	Long-Term Care	(Beds)	Mental Health
Colorado	96	(13,527)	187	(19,943)	29
Alamosa	1	(70)	1	(60)	1
Conejos	1	(43)	-0-	(-0-)	-0-
Costilla	-0-	(-0-)	-0-	(-0-)	-0-
Mineral	-0-	(-0-)	-0-	(-0-)	-0-
Rio Grande	2	(97)	3	(120)	-0-
Saguache	-0-	(-0-)	-0-	(-0-)	-0-
Total	4	(210)	4	(180)	1

PHYSICIAN DISTRIBUTION

County	Population	Primary Care Physicians	Ratio/ 1000	Specialty Physicians	Total Physicians
Alamosa	3,000	12	1.00	10	23
Conejos	7,900	1	0.25	1	2
Costilla	3,000	-0-	-0-	-0-	-0-
Mineral	800	1	1.25	-0-	1
Rio Grande	10,700	9	0.84	1	10
Saguache	4,000	2	0.50	-0-	2
Total	38,400	26	.68	12	38

	Primary Care				
	General	Family	Internal Medicine	Pediatrics	Total
Alamosa	6	2	3	1	12
Conejos	1	1	-0-	-0-	2
Costilla	-0-	-0-	-0-	-0-	-0-
Mineral	1	-0-	-0-	-0-	1
Rio Grande	4	3	2	-0-	9
Saguache	2	-0-	-0-	-0-	2
Total	14	6	5	1	26

	Specialty Care				
	General Surgery	Opthomology	Orthopedic Surgery	Psychiatry	Total
Alamosa	-0-	1	2	2	5
Conejos	-0-	-0-	-0-	-0-	-0-
Costilla	-0-	-0-	-0-	-0-	-0-
Mineral	-0-	-0-	-0-	-0-	-0-
Rio Grande	1	-0-	-0-	-0-	1
Saguache	-0-	-0-	-0-	-0-	-0-
Total		1	2	2	6

	Hospital Based			
	Anesthesiology	Radiology	Emergency Room	Total
Alamosa	-0-	3	2	5
Conejos	1	-0-	-0-	1
Costilla	-0-	-0-	-0-	-0-
Mineral	-0-	-0-	-0-	-0-
Rio Grande	-0-	-0-	-0-	-0-
Saguache	-0-	-0-	-0-	-0-
Total	1	3	2	6

BIRTH, LOW BIRTHWEIGHT, DEATH, INFANT DEATH FIVE YEAR AVERAGE RATES, 1974 - 1978 *

	Total Births		Low Birthweight		Total Deaths		Infant Deaths	
	Rate	Rank	Rate	Rank	Rate	Rank	Rate	Rank
Colorado	15.9	-	86.5	-	6.9	-	13.1	-
Alamosa	16.6	26	84.6	35	6.3	44	11.5	44
Conejos	19.9	5	102.9	14	7.5	36	17.9	15
Costilla	15.8	38	127.9	6	8.2	28	7.8	55
Mineral	10.2	63	222.2	1	4.5	59	22.2	7
Rio Grande	18.0	17	116.3	10	9.8	13	13.1	32
Saguache	19.8	6	100.3	17	7.5	37	12.5	39
Total	17.8	2	104.3	2	7.8	7	13.5	7

Birth and Death rates are per 1,000 population per year. Low birthweight (5 lbs. 8 oz. or less) and infant Death rates are per 1,000 live births per year.

NOTE: Rank by county is based on 63 Colorado counties. Rank for total (region) is based on 13 Colorado regions.

FERTILITY RATES 1978 *

	Women 15-44 Years	Number of Births		Fertility Rate
			Rate	
United States	-	-	-	66.4
Colorado	625,247	44,063	16.5	70.5
Alamosa	3,142	219	18.3	69.7
Conejos	1,566	166	21.0	106.0
Costilla	613	53	17.7	86.5
Mineral	181	8	10.0	44.2
Rio Grande	2,251	192	17.9	85.3
Saguache	796	79	19.8	99.2
Total	8,549	717	18.7	83.9

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* Information extracted from "Colorado Vital Statistics - 1978" published by Colorado Department of Health, Health Statistics Section.

(1) Annualized average enrollment

SLV-HMO ENROLLMENT HISTORY
1975
MEMBERS

	May	Jun	Jul	Aug
Employer Group	-0-	24	43	51
Direct Pay	-0-	-0-	-0-	-0-
Medicare Supplement	-0-	-0-	-0-	-0-
Community Health Center	574	813	923	1,081
CHC Medicare Supplement	-0-	-0-	-0-	-0-
TOTAL	574	837	966	1,132

	Sep	Oct	Nov	Dec
Employer Group	49	47	45	45
Direct Pay	-0-	-0-	-0-	-0-
Medicare Supplement	-0-	-0-	-0-	-0-
Community Health Center	1,124	1,167	1,209	1,113
CHC Medicare Supplement	-0-	-0-	-0-	-0-
TOTAL	1,173	1,214	1,254	1,158

ANNUAL GROWTH

	Average			
	Monthly		Year	
	Number	Percent	Number	Percent
Employer Group	3.8	60.9	45	N/A
Direct Pay	-0-	-0-	-0-	-0-
Medicare Supplement	-0-	-0-	-0-	-0-
Community Health Center	318.0	140.3	1,113	N/A
CHC Medicare Supplement	-0-	-0-	-0-	-0-
TOTAL	96.5	141.5	1,158	N/A

SLV-HMO ENROLLMENT HISTORY
1976
MEMBERS

	Jan	Feb	Mar	Apr
Employer Group	61	77	79	84
Direct Pay	-0-	-0-	-0-	-0-
Medicare Supplement	-0-	-0-	-0-	-0-
Community Health Center	1,103	1,157	1,261	1,359
CHC Medicare Supplement	-0-	-0-	-0-	-0-
TOTAL	1,164	1,234	1,340	1,443

	May	Jun	Jul	Aug
Employer Group	94	115	111	122
Direct Pay	-0-	-0-	-0-	-0-
Medicare Supplement	-0-	-0-	-0-	-0-
Community Health Center	1,496	1,572	1,563	1,306
CHC Medicare Supplement	-0-	-0-	-0-	-0-
TOTAL	1,590	1,687	1,674	1,428

	Sep	Oct	Nov	Dec
Employer Group	119	124	127	126
Direct Pay	-0-	-0-	-0-	-0-
Medicare Supplement	-0-	-0-	-0-	-0-
Community Health Center	1,370	2,310	2,750	2,821
CHC Medicare Supplement	-0-	-0-	-0-	-0-
TOTAL	1,489	2,434	2,877	2,947

ANNUAL GROWTH

	Average			
	Monthly		Year	
	Number	Percent	Number	Percent
Employer Group	6.8	9.0	81	180.0
Direct Pay	-0-	-0-	-0-	-0-
Medicare Supplement	-0-	-0-	-0-	-0-
Community Health Center	142.3	8.1	1,708	153.5
CHC Medicare Supplement	-0-	-0-	-0-	-0-
TOTAL	149.1	8.1	1,789	154.5

SLV-HMO ENROLLMENT HISTORY
1977
MEMBERS

	Jan	Feb	Mar	Apr
Employer Group	133	148	90	85
Direct Pay	-0-	-0-	77	94
Medicare Supplement	-0-	-0-	-0-	-0-
Community Health Center	2,903	3,074	3,276	3,297
CHC Medicare Supplement	-0-	-0-	-0-	-0-
TOTAL	3,036	3,222	3,443	3,476

	May	Jun	Jul	Aug
Employer Group	94	170	227	276
Direct Pay	106	119	173	178
Medicare Supplement	-0-	-0-	-0-	-0-
Community Health Center	3,213	3,280	3,645	3,702
CHC Medicare Supplement	-0-	-0-	-0-	-0-
TOTAL	3,413	3,569	4,045	4,156

	Sep	Oct	Nov	Dec
Employer Group	363	563	988	1,195
Direct Pay	215	275	307	348
Medicare Supplement	5	6	13	47
Community Health Center	3,870	4,157	4,422	4,644
CHC Medicare Supplement	-0-	-0-	-0-	-0-
TOTAL	4,453	5,001	5,730	6,234

ANNUAL GROWTH

	Average			
	Monthly		Year	
	Number	Percent	Number	Percent
Employer Group	89.1	20.6	1,065	848.4
Direct Pay	29.0	62.9	348	N/A
Medicare Supplement	3.9	37.8	47	N/A
Community Health Center	151.9	4.2	1,823	64.6
CHC Medicare Supplement	-0-	-0-	-0-	-0-
TOTAL	273.9	6.4	3,287	111.5

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SLV-HMO ENROLLMENT HISTORY
1978
MEMBERS

	Jan	Feb	Mar	Apr
Employer Group	1,426	1,462	1,611	1,616
Direct Pay	356	366	406	473
Medicare Supplement	13	14	29	38
Community Health Center	4,668	4,749	4,616	4,728
CHC Medicare Supplement	114	187	273	335
TOTAL	6,577	6,778	6,935	7,190

	May	Jun	Jul	Aug
Employer Group	1,609	1,667	1,750	1,732
Direct Pay	544	600	624	672
Medicare Supplement	41	43	48	56
Community Health Center	4,769	4,813	4,831	4,723
CHC Medicare Supplement	379	384	386	381
TOTAL	7,342	7,507	7,639	7,564

	Sep	Oct	Nov	Dec
Employer Group	1,654	1,691	1,737	1,851
Direct Pay	683	724	721	734
Medicare Supplement	60	58	65	69
Community Health Center	4,526	4,394	4,343	4,237
CHC Medicare Supplement	381	377	378	365
TOTAL	7,304	7,244	7,244	7,256

ANNUAL GROWTH

	Average			
	Monthly		Year	
	Number	Percent	Number	Percent
Employer Group	54.7	3.7	656	54.9
Direct Pay	32.2	6.4	386	110.9
Medicare Supplement	1.8	3.3	22	46.8
Community Health Center	(33.9)	(0.8)	(40.7)	(8.8)
CHC Medicare Supplement	30.4	63.5	36.5	N/A
TOTAL	85.2	1.3	1,022	16.4

SLV-HMO ENROLLMENT HISTORY
1979
MEMBERS

	Jan	Feb	Mar	Apr
Employer Group	1,826	1,969	2,074	2,015
Direct Pay	717	713	691	694
Medicare Supplement	67	67	65	76
Community Health Center	4,128	4,098	4,215	4,321
CHC Medicare Supplement	364	357	353	350
Colorado Medicaid	-0-	-0-	-0-	-0-
TOTAL	7,102	7,204	7,398	7,456

	May	Jun	Jul	Aug
Employer Group	2,030	2,190	2,168	2,127
Direct Pay	710	719	769	746
Medicare Supplement	81	87	90	94
Community Health Center	4,369	4,264	4,312	4,278
CHC Medicare Supplement	348	348	347	357
Colorado Medicaid	-0-	-0-	-0-	-0-
TOTAL	7,538	7,608	7,686	7,602

	Sep	Oct	Nov	Dec
Employer Group	2,133	2,342	2,292	2,275
Direct Pay	762	776	754	794
Medicare Supplement	100	105	109	118
Community Health Center	4,241	4,295	4,428	4,339
CHC Medicare Supplement	347	340	336	349
Colorado Medicaid	-0-	490	527	522
TOTAL	7,583	8,348	8,446	8,397

ANNUAL GROWTH

	Average			
	Monthly		Year	
	Number	Percent	Number	Percent
Employer Group	35.3	1.7	424	22.9
Direct Pay	2.5	0.7	30	8.2
Medicare Supplement	4.1	4.6	49	71.0
Community Health Center	8.5	0.2	102	2.4
CHC Medicare Supplement	(1.3)	(0.4)	(16)	(4.4)
Colorado Medicaid	43.5	68.5	522	N/A
TOTAL	95.1	1.2	1,141	15.7

SLV-HMO ENROLLMENT HISTORY
1980
MEMBERS

	Jan	Feb	Mar	Apr
Employer Group	2,292	2,378	2,546	2,585
Direct Pay	695	707	710	726
Medicare Supplement	114	115	131	132
Community Health Center	4,436	4,300	4,218	4,280
CHC Medicare Supplement	348	347	355	363
Colorado Medicaid	544	564	543	532
TOTAL	8,429	8,411	8,503	8,618

	May	Jun	Jul	Aug
Employer Group	2,613	2,693	2,678	2,699
Direct Pay	732	737	753	726
Medicare Supplement	143	143	147	157
Community Health Center	4,402	4,365	4,296	4,176
CHC Medicare Supplement	361	364	355	357
Colorado Medicaid	530	529	521	522
TOTAL	8,781	8,831	8,750	8,637

	Sep	Oct	Nov	Dec
Employer Group	2,780	-0-	-0-	-0-
Direct Pay	763	-0-	-0-	-0-
Medicare Supplement	156	-0-	-0-	-0-
Community Health Center	4,094	-0-	-0-	-0-
CHC Medicare Supplement	357	-0-	-0-	-0-
Colorado Medicaid	536	-0-	-0-	-0-
TOTAL	8,686	-0-	-0-	-0-

ANNUAL GROWTH

	Average			
	Monthly		9 Month	
	Number	Percent	Number	Percent
Employer Group	56.1	2.5	505	22.2
Direct Pay	(3.4)	(0.4)	(31)	3.9
Medicare Supplement	4.2	3.6	38	32.2
Community Health Center	(27.2)	(0.6)	(245)	(5.6)
CHC Medicare Supplement	0.9	(0.3)	8	2.3
Colorado Medicaid	1.6	(0.3)	14	2.7
TOTAL	32.1	0.4	289	3.4

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SLV-HMO ENROLLMENT HISTORY
TOTAL MEMBER MONTHS

	1975	1976	1977	1978
Employer Group	304	1,239	4,332	19,806
Direct Pay	-0-	-0-	1,892	6,903
Medicare Supplement	-0-	-0-	71	534
Community Health Center	8,004	20,068	43,483	55,397
CHC Medicare Supplement	-0-	-0-	-0-	3,940
Colorado Medicaid	-0-	-0-	-0-	-0-
TOTAL	8,308	21,307	49,778	86,580

	1979	(9 months) 1980	1981	1982
Employer Group	25,441	25,942	-0-	-0-
Direct Pay	8,845	7,302	-0-	-0-
Medicare Supplement	1,059	1,385	-0-	-0-
Community Health Center	51,288	42,863	-0-	-0-
CHC Medicare Supplement	4,196	3,562	-0-	-0-
Colorado Medicaid	1,539	5,342	-0-	-0-
TOTAL	92,368	86,396	-0-	-0-

	1983	1984	1985	1986
Employer Group	-0-	-0-	-0-	-0-
Direct Pay	-0-	-0-	-0-	-0-
Medicare Supplement	-0-	-0-	-0-	-0-
Community Health Center	-0-	-0-	-0-	-0-
CHC Medicare Supplement	-0-	-0-	-0-	-0-
Colorado Medicaid	-0-	-0-	-0-	-0-
TOTAL	-0-	-0-	-0-	-0-

	1987	1988	1989	1990
Employer Group	-0-	-0-	-0-	-0-
Direct Pay	-0-	-0-	-0-	-0-
Medicare Supplement	-0-	-0-	-0-	-0-
Community Health Center	-0-	-0-	-0-	-0-
CHC Medicare Supplement	-0-	-0-	-0-	-0-
Colorado Medicaid	-0-	-0-	-0-	-0-
TOTAL	-0-	-0-	-0-	-0-

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Senator **Schweiker**. As our final witnesses this morning we have the American Medical Association represented by Dr. Joseph F. Boyle, an internist from California, and vice chairman of the board of trustees of the AMA.

Testifying on behalf of the American Dental Association is Dr. John Houlihan, president-elect of the ADA, and a private dentist in New Hampshire.

Dr. Boyle and Dr. Houlihan, if you will please come forward. Dr. Boyle, if you would go ahead and introduce your associate.

STATEMENTS OF JOSEPH F. BOYLE, M.D., VICE CHAIRMAN, BOARD OF TRUSTEES, AMERICAN MEDICAL ASSOCIATION, ACCOMPANIED BY HARRY N. PETERSON, DIRECTOR OF AMA DIVISION OF LEGISLATIVE ACTIVITIES; JOHN J. HOULIHAN, D.D.S., PRESIDENT ELECT, AMERICAN DENTAL ASSOCIATION; AND HERBERT DOLINSKY, D.D.S., MEMBER, COUNCIL ON LEGISLATION AND HEALTH PLANNING AND CHAIRMAN OF LOCAL HSA, JERSEY CITY, N.J.

Dr. **Boyle**. Good morning, Senator.

I am Dr. Joseph Boyle, a physician in private practice in internal medicine in Los Angeles, Calif. I am vice chairman of the board of trustees of the American Medical Association.

With me are Harry Peterson, director of the division of legislative activities and Bruce Blehart, also of that division. We are very pleased to have this opportunity to present our views on the National Health Service Corps (NHSC) this morning.

In these comments we will highlight certain features of the program through a brief overview of the NHSC program, and a review of AMA's activities and position concerning the NHSC. Emphasis will be placed on the issue of placement of Corps personnel and other factors which should be considered if the Corps is to achieve desired goals.

NHSC OVERVIEW

The Corps was established under Public Law 91-623 to "improve the delivery of health services to persons living in communities or areas of the United States where health personnel and services are inadequate to meet the health needs of the residents of such communities and areas."

Health manpower shortage areas, in which NHSC personnel are placed, are defined in section 332 of the Public Health Service Act as "(A) an area in an urban or rural area (which need not conform to the geographic boundaries of a political subdivision and which is a rational area for the delivery of health services) which the Secretary determines has a health manpower shortage, (B) a population group which the Secretary determines has such a shortage, or (C) a public or nonprofit private medical facility or other public facility which the Secretary determines has such a shortage." The Secretary has been given and has exercised a great deal of latitude in ascertaining health manpower shortage areas as promulgated in the regulations.

In determining primary care shortage areas, the Secretary has established a critical population-manpower ratio at 3,500 to 1, and a subcritical ratio at 3,000 to 1. Thus, if a geographic area has a population to primary care physician ratio that exceeds the critical level, it may be designated as a primary care shortage area. If the ratio exceeds the subcritical level, the area may also be deemed as a shortage area if it can be shown that the area has an unusually high need for primary care physicians.

Population groups that qualify as primary care shortage areas are those that have barriers to access to the area's primary medical providers and where the number of physicians serving the group and practicing within 30-minutes traveltime of the center where the group resides is less than 1 to 3,500—1 to 3,000 where unusually high needs for health services exist. In 1975, there were 769 designated primary medical care shortage areas; in 1979 there were 1,710 such shortage areas—for all designated health manpower shortage areas, the figures would be 1,128 and 5,149, respectively.

In the 1979–80 academic year, there were 6,619 students who were attending medical school on NHSC scholarships. In return for each year of scholarship support, students incur an obligation of 1 year of full-time clinical practice in a health manpower shortage area. The scholarship recipient may be released from all or part of this service obligation if he or she agrees to complete the period of the obligation in a private full-time clinical practice in a health manpower shortage area. Individuals who elect this private practice option must agree to charge patients the usual and customary rate prevailing in the area, except in situations where the patient cannot afford such charge. In these cases, the provider must agree to charge a reduced rate or no fee at all.

AMA POSITION

The AMA has been involved with and has supported the National Health Service Corps since its inception. In 1972, the AMA contracted with the Corps to recruit private physicians to relieve Corps physicians on a short-term basis—such as for vacations, or meeting continuing education obligations. This program, known as Project USA, has been a valuable adjunct to the NHSC in operating the program. Project USA is still a successful AMA activity in affiliation with the NHSC.

We have appeared at numerous manpower hearings before this and other committees of the Congress and have made various recommendations to improve the operations of the Corps. The AMA has emphasized the need for the NHSC program to provide long-range solutions rather than temporary palliatives to the problems existing in shortage areas.

In other words, the program should strive to reduce or eliminate the number of unfilled shortage areas. Unless the program produces an effective retention rate of physicians remaining in private practice in shortage areas, after fulfilling obligated service, the program will never fulfill its true objectives. To improve this retention rate, the AMA has urged the Corps to work in placing personnel in areas where they would likely remain once they had completed their Federal obligation. We do, of course, recognize that some shortage areas, for a variety of reasons, may never be able to support a full-time physician.

As a means of helping to retain Corps physicians in the shortage areas upon the completion of their obligated service, the AMA has repeatedly testified in favor of having greater local medical community input into the assignment of Corps personnel. Through such input, the Corps physician would be assured that he or she was going into an area where the physician's presence was actually needed.

As the AMA pointed out in 1975, for any physician considering permanent settlement in a shortage area, it is an obvious plus if he or she starts out with the encouragement and support of a local medical community. This principle has now been accepted by the House of Representatives in its recent passage of H.R. 7203. Section 101(b)(1) of this bill would require the Secretary of the Department of Health and Human Services to ascertain the opinions of the local health professional societies as to the actual assignment for the NHSC member in the community. Additionally, in considering the potential assignment of Corps personnel, the Health Systems Agencies would be required to consider the comments of the health professional societies in the area.

The latest testimony of the AMA on the NHSC was presented before the committee on March 12 of this year when C. H. William Ruhe, M.D., a senior vice president of the AMA, stated "the AMA supports the NHSC program. Rather than decreasing the strength of the Corps at this time, aspects of the program should be carefully evaluated to determine whether its objectives continue to be met appropriately." He cited the specific need to examine the definition of "shortage area" and the changing concepts expanding the number of these areas.

PLACEMENT OF NHSC PERSONNEL

The AMA has been concerned about provisions in the law concerning the lack of involvement of local medical societies in the placement of Corps personnel. It is our firm belief that involvement of the medical community in the placing of NHSC physicians can serve constructively to enhance an area's ability to attract physicians with long-range service potential. The medical community is in an excellent position to ascertain the need for additional health care providers in the local community. Three examples of varying degrees of involvement of State medical societies point to varying degrees of success of the program in those States.

The State Medical Society of Wisconsin has recently completed a report on physician distribution in Wisconsin. In this report, the Medical Society points out that the NHSC "has not been effective in correcting problems of physician maldistribution." To help correct this deficiency in the program, the State Medical Society of Wisconsin has strongly recommended medical society input into the placement of NHSC physicians:

> A major problem with the NHSC program relates to site designations and physician placements. Some of the designations and placements in Wisconsin have been in areas where the need is marginal and have encroached on medically served areas. In some instances this has been [a] disincentive for practicing physicians to remain in the area. The effect of inappropriate placements is to discourage primary care physicians from permanently locating in such underserved area. Also, there are areas with an inadequate supply of primary care physicians that have either not received or sought designations as a NHSC site. Most of the problems associated with NHSC physician placement could be eliminated if the medical profession were consulted and included in the decisionmaking process.

Recent activity in the State of Oregon also illustrates the value and need for medical society input into the placement of Corps physicians. On May 22, 1980, the Oregon State Health Planning and Development Agency (SHPDA) formally recommended that the city of Salem and the immediate surrounding suburbs and areas be designated as a primary care manpower shortage area for low-income population. In a letter to the Bureau of Manpower—a copy of which was forwarded to this committee—the Oregon Medical Association objected to the designation of Salem as a primary care manpower shortage area, citing the availability of current services.

While there has yet to be a determination as to whether or not Salem will receive a shortage designation, there can be no doubt of the fact that the input from the State medical society will prove invaluable in making this decision. Clearly, such determinations should be made with the full benefit of as much input and information as is possible. Furthermore, the formalization of a working relationship between the agencies that work to place Corps personnel and the State medical society can effectively work to place Corps personnel in locations where there is the greatest need.

The State of Arkansas affords a different view, showing how effective the NHSC can be when there is a good relationship with the State medical society. The Arkansas Medical Society and the NHSC have been working cooperatively in attempting to alleviate the shortages of health manpower in that State. Through activity of the State medical society, a sizable number of physicians have gone into practice in counties designated as shortage areas, and through cooperation with the NHSC, a substantial number—24.68 percent—have been NHSC personnel.

Mr. Chairman, we would like to stress the value of working relationships such as that between the Arkansas Medical Society and the NHSC. Through this working relationship, the people of the State of Arkansas now have better access to medical care. This is the type of relationship which the Wisconsin State Medical Society has called for, and which could work effectively throughout the country.

RETENTION

The purpose behind the formulation of the NHSC was to bring health manpower to areas of the country that were not adequately served. Ideally, the Government should utilize the Corps as a catalyst to introduce the health care providers who are committed to serve in and remain in the designated shortage area. By using the NHSC in this manner, the number of shortage areas should decrease, and the need for the federally supported NHSC will correspondingly decrease. Also, as more physicians enter practice, it is reasonable to expect that more physicians will independently choose to locate in these areas for various reasons including lifestyle and practice choices. Simply stated, as more physicians freely enter into practice in the presently designated shortage areas, the need for the NHSC should diminish.

The retention of Corps personnel in shortage areas is a key component to the success of the program. The specific figure for the retention rate of physicians in the shortage areas upon the completion of their obligated service is not clear. While the NHSC has indicated that 53 percent of their personnel in 1979 have chosen either to extend their service of convert to private practice at a shortage site, it is impossible to tell from this figure how many of the 1979 NHSC field strength of 1,824 are serving beyond an initial obligation. While the number of shortage areas should diminish in the face of a 53-percent retention rate, in fact the number of such areas has increased.

The Senate Committee on Labor and Human Resources in its report on S. 2375 has recognized the need to significantly improve the retention rate and the need for more physicians to stay in the shortage area. The Senate Committee seeks to bolster the private practice option.

As S. 2375 has passed the Senate, it contains new provisions as follows: (1) it directs the Secretary to grant scholarships to individuals who are most likely to commit themselves to a career in the underserved area; (2) it has authorized income supplements for physicians who elect the private practice option; (3) it has expanded the availability of the private practice option accept medicare assignment; and (5) it has increased the availability of startup grants for physicians who elect the private practice option.

It is our understanding that greater use of the private practice option is planned; however, at the present time, use of this option is virtually nonexistent. While certain of the Senate provisions would make this a more practical option to obligated Corps service, a medical practice that has been developed under this program would not necessarily be a viable one.

By mandating that private practice physicians accept medicare assignment, for example, the physician would have to accept as payment in full an amount that the Health Care Financing Administration deems to be the "reasonable charge." Additionally, these physicians would have to accept other patients at reduced levels of payment or at no charge whatsoever. With these practice stipulations, we question a physician's ability to develop a viable practice which can continue after an end to subsidies. Such provisions are counterproductive and provide no incentive to remain in the shortage area upon the completion of the obligation period.

CONCLUSION

Mr. Chairman, as this committee considers health manpower legislation and the future of the NHSC, we want to emphasize that the NHSC program should not become the primary means of financing medical education. In previous testimony we have given the committee our recommendations for providing financial assistance to aid students with their medical education. We urge the committee to take these recommendations into consideration.

The American Medical Association continues to support the goals of the National Health Service Corps in providing medical personnel in truly underserved areas. However, we do perceive problems with the Corps in the designation of shortage areas and in the placement of Corps personnel. A significant step to alleviate these problems would be to allow input into the placement of Corps personnel from local medical societies. Such input could also have the advantage of increased cooperation between practitioners, and work to increase the retention rate of Corps personnel in the communities where they are placed.

Mr. Chairman, we commend the committee for holding these hearings to examine the National Health Service Corps. As the AMA looks into the Corps, and as more studies into the Corps are completed—Health Services Administration has recently commissioned Mathematica, Inc., to evaluate the effects of NHSC physician placements upon medical care delivery in rural areas, which study is to be completed on March 29, 1981—it will be easier to plot the future for the Corps. Until definitive results of these studies are available, we believe that the Corps scholarships should not be expanded beyond current numbers. For the Corps to be most effective, it must work as an adjunct to the physician in private practice. Only through the proper allocation of Corps personnel will health manpower shortage areas be eliminated.

Thank you.

Senator SCHWEIKER. Thank you very much, Doctor.

Doctor Houlihan?

Dr. HOULIHAN. I am Dr. John Houlihan, president-elect of the American Dental Association. In addition to my duties with the association, I also maintain a private dental practice in Claremont, N.H. Accompanying me is Dr. Herbert Dolinsky. Dr. Dolinsky is a member of the Council on Dental Health and Health Planning of the ADA.

We appreciate this opportunity to present the views of the association on the National Health Service Corps.

We would like to highlight certain portions, and submit the complete statement for the record.

The American Dental Association has a longstanding record of support for programs to improve access to dental care for underserved and other special population groups. Almost 30 years ago the association adopted policy urging its constituent societies to survey the needs of these populations, develop demonstration projects which address these needs, and implement broad-based efforts to reduce or eliminate barriers to comprehensive dental care.

More recently, the 1979 ADA House of Delegates approved a landmark report titled, "Prevention and Control of Dental Disease Through Improved Access to Comprehensive Care." The report contains a series of 33 significant recommendations which, we believe, can serve as a national strategy for bringing all citizens into the mainstream of the dental care delivery system.

Fundamental to the thrust of the "access" program is the concept that improved oral health of our citizens requires a shared responsibility to be borne by the dental profession, government at all levels, the private sector, and the individual. In recognition of an appropriate Federal role in achieving these objectives, the association is presently endorsing separate legislation to: Provide comprehensive dental care for the elderly under medicare part B; mandate dental services under medicaid for children of low-income families; and to establish cost-sharing programs of dental care Federal employees and dependents of active duty military personnel.

Our recognition of a Federal role does not, however, include the continued expansion of direct dental care delivery programs in areas where services are or can be made available through the private practice sector. The American Dental Association supported the initial establishment of the National Health Service Corps as an interim measure; one that would serve as a catalyst for the development of private dental practices in areas identified as underserved. Unfortunately, this concept would seem to have been largely abandoned as the Department of Health and Human Services has moved to create a permanent Federal health delivery system.

I wish to emphasize that our objections to the National Health Service Corps do not—I repeat, do not—stem from the goals which Congress expressed in creating the program. Rather, the association is concerned that the Department's exaggerated emphasis on the role of the Corps (1) is occurring at the expense of much needed improvements in other public assistance programs, and (2) ignores efforts which are underway in the private sector to improve geographic access to dental care.

For a significant segment of our population the major barrier to dental care is economic; in other words, the inability to purchase adequate dental services. By limiting benefits, eligibility, and reimbursement rates for dental care under medicaid, many States have created pockets of underserved groups in areas that may otherwise have an adequate supply of dental practitioners.

The ADA estimates that thousands of additional dentists would participate in medicaid were it not for the chaotic administration, unacceptable low-payment levels, and long delays for reimbursement that characterize a large number of State programs. As a consequence, medicaid eligibles often find difficulty in locating dentists who can afford to provide care under these conditions. This in turn has led to the designation of these populations as underserved and eligible for NHSC dentists.

As long as this National Health Service Corps is available to the States, there exists the incentive for States to substitute Corps personnel for their own financial contributions to medicaid. To cite an example, a State with one of the largest concentrations of NHSC dental placements has no program of adult dental care under medicaid, and provides services for only one-quarter of the children who are medicaid eligible.

A second factor which should be considered in projecting the scope of the National Health Service Corps is the substantial improvement which is occurring in the distribution of private dental practitioners. Between 1976 and 1979, the number of counties in the United States without a dentist, or in which the population to dentist ratio exceeds 5,000 to 1, was reduced by 211; a change of over 20 percent. This results, in part, from the significant expansion in the graduating capacity of the dental schools. And we believe it demonstrates that the competitive forces in the marketplace are at work for dentistry.

A more coordinated effort to improve access to dental care is now underway with the "National Health Professions Placement Network." This program, which became operational nationwide in the summer of 1979, is jointly sponsored by the ADA Health Foundation and the William Kellogg Foundation. Its major purpose is to match dentists who are seeking professional opportunities with communities which are attempting to recruit a dentist. And we have high hopes for this program.

Now, Senator, I would like Dr. Dolinsky to comment on five specific areas of the current operation of the National Health Service Corps, which we believe require change.

Herb?

Senator **Schweiker**. I am going to have to go to another meeting shortly. I wonder if you can summarize this for me, if you would, please.

Dr. **Dolinsky**. National Health Service Corps scholarships. There appears to be little coordination between the number of NHSC scholarships awarded for dentistry and the actual need for Corps dentists to serve in shortage areas. It is important to recognize that future requirements for Corps personnel are not a function of the number of designated shortage areas but rather of the existence of a viable sponsor and a site in which those practitioners can effectively serve.

Over the next 4 years more than 600 dental students will graduate with a scholarship obligation to serve in the National Health Service Corps. Sites for 340 Corps dentists currently exist. Assuming for the moment that (1) none of these current Corps dental sites convert to a self-sustaining private practice—and thus continue to be available for future placements, and (2) all of the estimated 150 additional requests for Corps dentists now pending in the Department are found to be valid, we find that the NHSC will have less than 500 assignment opportunities for the 600-plus dental students now in the pipeline. This dilemma is compounded when Corps personnel extend their service beyond the obligation period, as well as by the additional number of volunteer Corps dentists who must be placed annually.

In the opinion of the American Dental Association, this has led, and will continue to lead, to a situation in which considerable pressure is exerted upon NHSC regional offices to generate applications for Corps dentists. Many of the sites that have been identified for placement are located in areas of marginal need. This is reflected in the fact that a high percentage of all Corps dental assignments to date have been in areas with an 03 and 04 designation category—the lowest degree of need.

This problem can, we believe, be partially corrected through a simple amendment to the NHSC scholarship authority. Under current law, section 756(b), a specified percent of all funds appropriated for Corps scholarships must be allocated for dentistry. This precludes the Department from projecting its dental scholarship requirements on the basis of graduates which it can effectively utilize. By removing this stipulation, the Corps would be able to concentrate its dental resources on meeting the needs of the most serious shortage areas.

The association is particularly concerned over the extent to which the Department has unilaterally changed the operational thrust of the Corps. We are speaking here of the shift in emphasis away from the solo practice delivery model to the promotion of a permanent Federal presence in the form of fixed site clinics. Department officials have indicated that a majority, 80 percent, of future dental placements will be in integrated delivery systems, for example, community and migrant health centers, and other fixed sites. This policy has the immediate effect of penalizing those rural and urban communities which do not have interdisciplinary facilities. Of most importance is the fact that the placement of Corps dentists in these fixed site centers virtually precludes the conversion of this form of Corps-delivered care to a self-sustaining private practice—an objective which we believe was a central feature of the original NHSC legislation.

Despite this experience, the Department continued to insist upon maintaining the integrated delivery approach. In view of the unique nature of the dental delivery system, we would ask the subcommittee to consider the adoption of appropriate amendments stipulating that the NHSC shall whenever possible utilize the private practice model of future dental placements.

A major problem in the statutes and administration of the NHSC is the exclusion of individual health care practitioners and their local societies from meaningful participation in the process leading to the designation of shortage areas and the placement of Corps personnel in these areas.

The point at which shortage areas are designated is perhaps the most crucial point in this decisionmaking process. It is thus of vital importance that areas so identified be ones which unquestionably lack the health care resources to serve their populations. The two components of the health care system which are best equipped to assess the appropriateness of proposed designations are the Health Systems Agency and the local dental or other relevant professional society.

Current law, however, imposes no requirement upon the Corps to solicit the participation or comments of the local health professions society. We view this as a serious defect. In the case of dentistry, there should be little question that the local society and its members can make the most informed judgments on available dental resources and the demands for those services. The association strongly urges that the NHSC authorities be amended to insure that dentists be fully represented in the designation process.

Related to this issue is the limited involvement which local societies have in the proposed placement of Corps personnel. The National Health Service Corps does require that the comments of the professional societies are to be requested upon application for Corps assignments. However, a comment period of only 30 days is generally allowed. This regulated opportunity for local, informed input is far too little and too late.

The health manpower bill which has passed the House of Representatives contains statutory amendments to the designation and placement authorities of the Corps which will help to alleviate these problems. We urge adoption of those changes by the Senate.

The association believes that an eagerness on the part of some community groups to obtain a federally subsidized dental clinic, coupled with the pressure on Corps officials to place an increasing supply of scholarship obligated graduates, will continue to result in assignments which are inappropriate. A common theme which many in our profession have expressed is the unwillingness of the Department to consider alternatives to the NHSC in meeting the health care needs of underserved populations.

An expanded statutory role for local health professions societies in the designation and placement process of the NHSC may produce some improvement in this area. Additional remedies are needed, however. It is understandable that Federal officials will seek to promote the programs they administer. The National Health Service Corps is no exception. A balance must nevertheless be struck between program advocacy and responsible program management. We are concerned that Corps officials, particularly at the regional level, have failed to subject requests for Corps dental placements to the rigorous examination which the Corps intended.

Alternatives to the National Health Service Corps—less expensive and more lasting—are available. They have been proposed, and they have too often been ignored. We believe that safeguards must be implemented which will prevent the placement of Corps personnel in communities where a bona fide effort has been launched to address access problems with local resources.

The final area on which we wish to comment involves the provision of health care to special population groups. Under current law, Corps personnel may be assigned to those groups which experience unique cultural or economic barriers to health services. Migrant workers and non-English-speaking populations are an example.

The American Dental Association unreservedly supports efforts to extend health care to individuals who are faced with valid socioeconomic access problems. We believe, however, that it is inappropriate for National Health Service Corps dentists who are placed to serve a special population to also provide routine dental care for those who are able to obtain services in the private sector. Such activities represent a clear duplication of resources and have the potential of adversely affecting the delivery of dental services to those populations which the Corps site is intended to serve.

It should, therefore, be stipulated in law that a NHSC dentist who is placed to serve an identified underserved population may provide only emergency services to individuals who are not from such populations.

Mr. Chairman, these comments, criticisms, and recommendations relating to the National Health Service Corps have been offered in what we hope is a constructive manner. I wish to once again emphasize that the dental profession fully recognizes that every American does not have the opportunity to receive the care the public and organized dentistry would wish.

Dentists cannot remove the remaining barriers to improved access without the cooperation and assistance of many elements of society, public and private. It is, as we noted earlier, a shared responsibility. Our purpose today was to outline the efforts which dentistry has initiated, to focus on remaining problem areas, and to recommend what we believe are appropriate solutions.

This concludes our statement. Dr. Houlihan and I would be happy to attempt to respond to any questions the subcommittee may have.

Thank you.

Senator SCHWEIKER. Thank you, Dr. Dolinsky.

I will start with Dr. Houlihan. Your statement contains evidence that substantial improvement in the geographic distribution of dentists has occurred.

Do you believe this trend will continue?

Dr. HOULIHAN. Most definitely, Senator.

Senator SCHWEIKER. Why, Doctor?

Dr. HOULIHAN. Because, as I explained in my presentation, the increasing number of dental graduates, the marketplace factors being what they are today, we are seeing it in all rural and urban areas.

Senator SCHWEIKER. And, Dr. Boyle, we have heard considerable testimony this morning that a substantial improvement in geographic distribution of physicians has occurred.

Do you believe this will continue, and why? The Department of Health and Human Services says that only 1,100 slots will be filled in terms of underserved areas after a decade of putting 180,000 new medical doctors in the system?

Dr. BOYLE. Senator Schweiker, I cannot tell you there has been a substantial change. I can tell you, at the present time there is a very significant change occurring. We have not had a good opportunity to measure this.

We do not really question the data provided by Rand and others, but we do have some question about the methodology employed in its development. We think that that information can be generated from our own research center.

From personal observation, I can assure you that there are more and more physicians going into underserved areas. They are going for a variety of reasons, some of which have nothing to do with the production of more doctors. It has to do with many doctors becoming disenchanted with the urban practices, and moving to rural areas.

In California, this has been observable on almost a monthly basis. So far as the migration of medical specialists into more remote areas, that also is occurring. And it is occurring in the face of the fact that many of these people are incurring decreases in their annual net income, simply for a different kind of life they want to live.

There is also a pressing fact, and that is there is already a substantial, if not a physician overpopulation, at least approaching that point in most of the urban areas. And many of the metropolitan areas, as cited this morning, in San Francisco—San Francisco, Calif.—there is no question doctors are leaving the city and going to other communities, simply because they cannot continue a successful practice in that environment.

Orange County, which had a population—the population almost doubled in Orange County over the past 5 to 8 years. The physician population quadrupled. As a consequence, those doctors are leaving, as well. I believe it will continue and continue for a variety of forces.

Senator SCHWEIKER. I want to thank both the American Medical Association and the American Dental Association for participating, for their testimony, and for their definitive and quite specific statements. We appreciate the work and efforts put into it.

[The following was received for the record:]

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Financing of Medical Education

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Introduction

In discussions on the financing of medical education – and of higher education in general – prevailing levels of tuition are frequently viewed as barely justifiable. It is argued that any proposed increase in tuition will be a move away from the social optimum. When such increases are nevertheless forced on institutions of higher education, the latter typically explain the increases to their students as the product of a myopic and insensitive public policy. It is therefore not surprising that students view increases in tuition with righteous indignation.

The purpose of this essay is to suggest that in the case of medical education – as in other branches of higher education – such indignation may not be warranted. Indeed, it can be argued that prevailing levels of tuition are likely to lie much below socially optimum levels. Quite aside from mere budgetary pressures, there appear to be compelling *economic* and *ethical* reasons for favoring currently proposed increases – and subsequent further increases – in the tuition-charged students enrolled in institutions of higher education, certainly in medical schools. A corollary is that while society may find it useful to permit, say, medical and dental graduates to repay loans for health professional training through service in underserved areas, there are no compelling ethical or economic reasons why society *must* make that option routinely available to any graduate favoring it.

I begin the discussion with a few remarks on occupational choice. Next, prevailing trends in the markets for health manpower are indicated and their implications for the issue at hand are explored.

Occupational Choice as an Investment

Virtually any professional activity involves three distinct though interrelated facets: (1) professional services are rendered by the professionals to their clients; (2) the professionals derive an income from that activity, and (3) either the clients or someone paying on their behalf must furnish the fiscal sustenance expected by the professional.

For resaons best understood by sociologists or psychologists, most professionals find it difficult to acknowledge with candor the importance of the second factor. Pedagogues, for example, almost invariably stress the service-aspect of their activities, even in instances where their sole objective may be to shift up the demand for pedagogic services. Health professionals exhibit a similar reluctance to discuss economic issues with blunt candor. Physicians invariably remind one that they do 'not practice medicine for the money' when a more accurate statement would be that at the prevailing (fairly high) *average* income earned by physicians, an *increment* in income of $ 10,000 or so would not move the typical physician one way or the other. It is convenient, although quite fallacious, to portray indifference to relatively small increments in income as indifference to pecuniary reward as a whole. To test my proposition, one need merely propose to reduce *average* physician income by, say, 20% and observe the profession's response to such a proposal.

Because professionals prefer to profess indifference to pecuniary reward, few of them acknowledge pecuniary reward as an important factor influencing their occupational choice, and many of them find it offensive to have their occupational choice caricatured as an *investment decision* akin to, say, a person's decision to invest in a retail store or in a service station. Yet the analogy has merit.

No economist would assert that pecuniary factors dominate occupational choice *to the exclusion of all other* factors. In selecting an occupation, candidates first of all confine their search to options that seem compatible with their perceived aptitudes. It can also be supposed that candidates have distinct preferences concerning their future social role. For example, other things (including fiscal reward) being equal, strong convictions on desired social roles ma dictate a student's choice to become a medical doctor rather than an atomic physicist. It would be hard to believe, however, that modern medical students in the United States and elsewhere typically chose their careers completely in abstraction from pecuniary reward. Recent research on the motivation of medical students suggests the opposite. This is, of course, neither shameful nor surprising.

The typical American physician is a private entrepreneur and is likely to remain one for decades to come. A fundamental issue now before society is the extent to which public subsidies should be granted those choosing to invest in medical entrepreneurship. Resolution of this issue furnishes the normative foundation on which an ethically defensible and economically sound public policy can be structured.

One can think of three reasons why society would wish to subsidize an individual's investment in a particular economic activity – be it a profession, a retail store, or a service station: (1) Individuals investing in alternative activities receive public subsidies, so that horizontal equity calls for a subsidization of the particular investment in question. (2) In the absence of the subsidy, the overall level of investment in the activity would fall below the level society deems adequate. (3) Society wishes particular subsets of individuals (e.g., members of minority groups, or women) to invest in the activity in question, perhaps to the exclusion of other groups.

In the case of medical or dental training, the first of these reasons can be dismissed as basically invalid. Few persons receiving graduate professional education ever receive anywhere near the level of subsidies routinely accorded medical students. In fact, many of them – e.g., students of law or business – do not receive any significant subsidy from the public sector. More important still, persons seeking to invest in nonprofessional economic activities – e.g., a service station – do not now receive any public subsidy in their endeavor, although their tax rates are identical to those borne by professionals with identical taxable incomes.

The second and third reasons, on the other hand, merit further discussion. In an era of acute health manpower shortages, for example, a case for subsidizing health professional training could probably be made. Similarly, a case for subsidizing particular target groups could be made should tuition charges and other expenses act as an effective barrier to entry into the medical profession. In the next section, I explore whether these are the prevailing circumstances.

Prevailing Conditions in Health-Manpower Markets

Ever since the mid 1960s, the Federal government has expended large sums of money to encourage upward shifts in the supply of health manpower. This encouragement has taken the form of institutional grants to health professional schools, and of direct assistance to their students. The policy legitimizing this

Table I. Sources of funds for medical schools in the United States 1958–1959 and 1973–1974

Source	Amount in 1958–1959 $ (in millions)	Percent of 1958–1959 total %	Amount in 1973–1974 $ (in millions)	Percent of 1973–1974 total %
I Federal				
Contracts and grants for teaching	20.8	6.6	250.1	10.3
Contracts and grants for research	74.1	23.5	498.3	20.6
Sponsored multipurpose and service	–	–	96.0	4.0
Indirect costs charged to federal grants and contracts	–	–	137.0	5.7
Total federal support	94.9	30.2	981.4	40.6
II Nonfederal grants and contracts for restricted programs	41.2	13.1	435.6	18.0
III State appropriations	49.8	15.8	449.6	18.6
IV Internal funds				
Tuition and fees	24.4	7.8	105.9	4.4
Fees for professional services	10.6	3.4	194.4	8.0
Other internal sources	74.3	23.6	191.4	7.9
V Other sources				
State, city and country	8.2	2.6	32.4	1.3
Gifts	10.9	3.5	26.5	1.1
VI Total sources of funds	314.3	100.0	2,417.2	100.0

Source: Medical School Finances. J. Am. med. Ass. *234:* 1350 (1975), table 36.

flow of funds is generally known as 'health manpower policy'. It has found legislative authority under a series of legislation beginning with the Health Professions Educational Assistance (HPEA) Act of 1963 and recently continued with the HPEA Act of 1976. Additional indirect support for medical education has flown to medical schools in the form of research grants or reimbursement under the Medicare/Medicaid programs. State treasuries also have granted substantial

Table II. Flow of federal funds to US medical schools by agency and purpose, 1972–1976 (millions of dollars)

	1972		1974		1976	
	$	%	$	%	$	%
Total federal funds	844	100	1,098	100	1,304	100
Department of Health, Education and Welfare	818	96.9	1,068	97.3	1,213	93.0
Research and development	*557*	*66.0*	*759*	*69.1*	*884*	*67.8*
Education and training	*153*	*18.1*	*215*	*19.6*	*263*	*20.1*
Construction	*109*	*12.8*	*94*	*8.6*	*66*	*5.1*
Other federal agencies	26	3.1	30	2.7	91	7.0

Source: US Office of Management and Budget, Special Analysis – Budget of the United States Government (1974: table J-14, p. 144; 1976: table K-9, p. 173; 1977: table K-13, p. 201.

financial support to public medical schools. Tables I and II convey a sense of the role of public funds in medical school financing. It is seen that the tuition paid by students – although nontrivial from the students' perspective – represent only a modest proportion in the schools' overall flow of funds. Although this flow supports research and patient care in addition to medical education *per se* it can be doubted that the typical medical student in the United States now pays for more than one-quarter to one-third of the true cost of his or her education.[1]

The policy to subsidize health manpower training dates back to a period in which the United States believed itself to be critically short of virtually any type of health manpower, but notably of nurses and physicians. To eliminate this perceived shortage, federal funds were applied to encourage the expansion of the nation's health professional schools and to entice potential candidates toward health careers. This flow of federal funds has been accompanied by a remarkable expansion in the capacity of American medical schools, an expansion that has yet to peak. By the late 1970s, for example, that capacity is likely to be more than double its level a decade ago!

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[1] It is estimated that the annual cost of a medical education now stands at about $ 15,000. Student's outlays for tuition, room, board and expenses appear to range between $ 4,000 and $ 6,000 per year (*Hadley et al.*, 1978, table 20, pp. 93, 107).

Drastic increases in the capacity of training facilities can have long-run consequences that are not intuitively obvious. At the time the policy was devised it was probably not known that the current capacity of medical schools facilitated by that policy, if used, would push up the nation's physician-population ratio until well into the next century, and would do so even if the United States had not permitted a single foreign medical graduate to enter after 1970. As secretary of Health, Education and Welfare *Joseph A. Califano* recently observed in his address to the American Association of Medical Colleges (1978):

> '... The number of physicians in active practice increased 46 percent between 1960 and 1975; the ratio of physicians to population increased from 143 per 100,000 people to 177 per 100,000 people.
>
> 'By the year 1990, we estimate that the supply of physicians in the United States will increase another 57 percent, to 594,000 active physicians – equivalent to 242 physicians for each 100,000 people in this Nation.
>
> 'By virtually all of the accepted yardsticks, this portends a substantial oversupply of physicians on a national basis: an excess of 23,000 to 150,000 doctors by 1990, depending on how we measure physician need.'

The supply of manpower currently projected will provide the nation with added health services, and that may be all to the good. It must be kept in mind, however, that the projected supply of physicians necessarily represents a future demand for physicians incomes. And if one allows that each type of health manpower will seek to achieve at least some secular growth in *real* income, then the amount of *real* physician income demanded per capita in the year 2000 may be almost double its corresponding level in 1970.

In the absence of third-party payment, a surplus of physicians might, of course, exert downward pressure on physician fees and on average physician income. But total national outlays on physician services might nevertheless continue to increase apace, for even if supply pressure would serve to depress the average income per physician, there would be more physicians receiving these (relatively lower) incomes and overall spending on physicians might very well continue to rise.

It can also be supposed that the bulk of revenues accruing to physicians will sooner or later come from third parties under a national health insurance program – perhaps even from public budgets altogether. Evidence from other nations suggests that in such a 'market' environment, political forces will guarantee physicians an adequate income almost regardless of supply conditions. *In other words, a realistic perspective is to view the graduation of a medical* *student as an implicit commitment on the part of society to furnish that graduate a generous 30- to 40-year annuity.*

This annuity, it must be noted, will almost surely obligate society to incur expenditures in excess of $ 70,000 to $ 80,000 average net incomes (in 1978 dollars) physicians will seek to earn. To earn their net income, physicians will deliver health care to patients and thereby inevitably obligate still other expenditures – e.g., those of laboratories, hospitals and the pharmaceutical industry. While much of the activities so supported will be of benefit to patients – a hotly debated issue at this time – society may simply not wish to devote the requisite fiscal resources to health services. Indeed, current efforts to contain overall health-care expenditures signal precisely the opposite intent. For present purposes, we may draw from these efforts the conclusion that public subsidies for medical education can no longer be justified as a remedy for underinvestment in medical education. There appears to be overinvestment at this time!

Cost-Containment through Supply-Containment

The upshot of the preceding section is that our policies on health expenditures and on health manpower should at all times be closely coordinated. Given our apparent inability to contain expenditures by controlling the demand for health care, health manpower policy may well be one of the more powerful instruments society has for controlling the secular rise of overall health-care expenditures in this country.

The notion of using supply containment as a means to cost containment is not novel. It appears to have been consciously adopted in other nations, e.g., in Canada and West Germany. Whether such a policy could be implemented in the United States is another matter. For one, given the geographic mobility of health manpower there would have to be centralized control over training places to preclude individual regions from competing for physicians by constructing medical schools. Second, one would have to control the growth of privately financed health professional schools – a touchy issue in a democratic society. Third, the policy would require policymakers to determine the 'right' overall supply of physicians. There are no objective criteria on which that determination could be based. In the context of a supply-containment policy, the political risks of underestimating the future demand for physicians would probably induce policymakers to encourage excess supply once again.

In view of the technical difficulties and political risks inherent in outright supply containment, a more sensible first step in the direction of that policy would be simply to reduce the current, government-fueled excess demand for health professional training. To achieve this objective, there would be a gradual reduction and eventual elimination of the substantial state and federal subsidies now granted everywhere to health professional training. Students in health professional schools would be asked to shoulder an ever-increasing proportion of the true full cost of their education. Such a policy would clearly have to be accompanied by more generous loans than are now available to students – certainly in the United States. These loans should be sufficient to finance annual tuition and living allowances. They should be amortized, with normal interest, at an annual rate standing in some proportion to the graduate's cash income. Horizontal equity would indicate that these amortizations be treated as a tax-deductible business expense.

This proposal is apt to be viewed as controversial and therefore may warrant additional comment.

Health professional schools in Europe are effectively part of the public sector and can therefore be readily controlled by it, at least in principle. The preferred approach to limiting training for particular professions appears to have been to ration a more or less fixed quota of first-year enrollments on the basis of academic standing, but to levy only nominal tuition fees. It is thought that this mechanism assures equal opportunity of access to professional training, while protecting society from an excess supply of otherwise uncontrollable professionals. Predictably, successful candidates are endowed by this mechanism with substantial 'economic rents' (windfall profits), especially physicians.

At the other extreme – and purely for the sake of juxtaposition – one can imagine a system in which a predetermined quota of entry places is auctioned off among a pool of applicants previously certified as academically qualified. Justification for setting a quota at all would, once again, be the occupation's presumed ability to induce demand for its services. The approach may seem to ration available entry places on the basis of *ability to pay.* However, if all candidates had access to a loan fund providing loans up to the final auction price (plus incidental costs) entry places would be rationed on the basis simply of *willingness to pay.* Under this system, all windfall profits would be bid away and turned over to the auctioneer (society). The final bid price might well exceed the actual cost of a medical school education.

The American system of health professional training lies somewhere in-between these extrema. The fiscal dependence of health professional schools on public sector funds provides an indirect though imperfect mechanism for limiting the supply of entry places. Tuition charges are much below the actual cost of training, but sufficiently high to act as a serious financial barrier to entry into training – especially in medical schools. Since available scholarships and student loans are too low to compensate for this barrier, the admissions process favors members from upper-income families who tend to be favored in any event because of the superior elementary, secondary and undergraduate education available to them. Furthermore, since tuition is below cost and entry is restricted, the system bestows upon successful candidates windfall profits.

It is certainly an open question which of the three systems of financing medical education would be the more equitable. The general notion in the United States and in Europe, appears to be that public subsidies to medical education are equitable. On the surface this notion has intuitive appeal, especially if one relates the incidence of the subsidy to the income of the recipient's parents. It seems more appropriate, however, to relate the incidence of the subsidy directly to the eventual income of its recipient.

A medical education is, in effect, an investment in human capital. It is an investment that propels the medical student, *from whatever socioeconomic stratum (s)he may come,* into one of the nation's highest income brackets. The cost of a medical education can be surely amortized out of the recipient's future high income. A numerical illustration will serve to support his proposition.

As was noted in footnote 1, the annual full cost of a medical education at the undergraduate level is currently estimated to be about $ 15,000 per student, in 1978 dollars. If medical students were charged tuition at that level, adequate and automatic loan facilities would obviously have to be made available to them. This could be achieved through a publicly administered, revolving loan fund. At an annual interest rate of, say 8% on outstanding principal, a student borrowing, say $ 20,000 per year during 4 years of undergraduate training would have accumulated a debt of $ 97,332 upon graduation from medical school. This seems like a staggering sum, although some upper-income families now borrow as much, or more, just to finance their residence.

If one permitted physicians to amortize their accumulated debt in, say, 15 equal annual installments, with the first payment due no earlier than at the end of the tenth year after entering medical school, the constant annual debt service charges (repayments of principal, and interest) would be only about $ 16,700 (at an interest rate of 8% per year). This amortization would certainly not drive the typical medical practitioner into the poorhouse. After all, physicians are currently earning, *on average,* a pretax income of between $ 65,000 and $ 85,000! On the assumption that the amortization of the loan were treated as a tax-deductible business expense, the net impact on the physician's after-tax cash flow would be only about $ 8,000 per year. And this constant cash outlay would come out of an after-tax income steadily rising with inflation and productivity gains. For example, a physician earning a pretax $ 70,000 income in 1978 would earn $ 167,000 per year 15 years later at a general inflation rate of 6% per year, even if he or she experienced no increase in real income. The last loan installment of $ 16,700 would amount to no more than 10% of this pretax income.[2]

It will undoubtedly be argued that if medical students were required to finance their investment in a medical career in the manner proposed here, they would, as physicians, simply raise their fees to recoup their annual debt-service costs from their patients. That argument assumes that physicians as a group now charge for their services less than the market can bear. Those making the argument need to demonstrate that physicians have quite this leeway to set their fees, even now, under an emerging physican glut.

It may also be argued that substantial further increases in medical school tuition would automatically eclipse students from lower income families from entry into the medical profession, if only because of the high initial outlays on this investment. That argument would have force in the absence of a readily accessible and generous loan program. On the other hand, if an adequate loan

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[2] If a medical student borrows $X per year at the beginning of each of the 4 years of medical school, his/her total indebtedness will have accumulated to:

$$P_N = X\left[\frac{(1+i)^5 - (1+i)}{i}\right](1+i)^N$$

N years after graduating from medical school if he or she is charged an interest rate of i on outstanding principal. At that same interest rate, the physician would have to pay an annual repayment of:

$$Z = \left[\frac{P_N \cdot i}{1-(1+i)^{-Y}}\right]$$

if the debt P_N were to be paid off in Y equal annual installments of $Z, with the first installment being due at the end of the (5+N+1)th year after entering medical school. If the physician's annual pretax income N years after graduating from medical school were $K and that income grew at an average annual rate j for Y years, then the annual pretax income in year Y would be:

$$I_Y = K(1+j)^Y.$$

The numbers presented in the text have been calculated with these equations.

program were made available to all medical students – as it clearly should be – then a sensible person would have difficulty to view as discriminatory a policy requiring the benefactors from an investment to amortize the true cost of that investment out of their future incomes, especially when the totality of these costs would rarely exceed 2 years' future income.[3] Here it must be noted that members from low-income groups choosing to invest in, say, a service station now are asked to bear precisely such amortization! The question can be asked why such persons should be required to subsidize with their taxes the occupational investment of their more fortunate peers accepted by medical schools. In short, there is really little substance to the common argument that high tuition levels inevitably discriminate against low-income families and hence against minorities. There need not be any effective discrimination if adequate loan provisions are made available. The repayment of such loans could easily be pegged to future income. It goes almost without saying, of course, that the out-of-pocket costs borne by any graduate student in his/her education – whether financed by loans or otherwise – should be a tax-deductible expense chargeable at some rate against future income. It is a privilege already enjoyed by persons investing in most other forms of economic activity.

Loan Redemption through Service in Shortage Areas

Governments pursuing supply-containment policies to contain health-care expenditures inevitably shoulder responsibility for an adequate geographic distribution of the limited supply. In the United States that responsibility appears to have been assumed by the public sector in any event. Authorities designated by society for this purpose have been mandated to estimate the medical manpower needed in the various shortage 'areas' and to staff these areas with physicians who are permitted to repay their educational loans through service in these areas. At the federal level, authorization for this type of policy was included in the Health Professions Educational Assistance Act of 1976. The relevant provision in the Act reads as follows:

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[3] It is sometimes argued that members from the low-income groups – especially from low-income minority groups – would be reluctant to incur large debt for medical training even in the face of a handsome future payoff. Basically, that argument rests on the implicit notion that individuals in these social strata are inherently lacking in business acumen. It is a condescending argument. This author is not impressed by it.

National Health Service Corps (NHSC) Scholarships

Authorization to appropriate funds for scholarships equal to (1) tuition and all other reasonable expenses and (2) a monthly stipend of $ 400.00 increasing over time in step with Federal salaries.

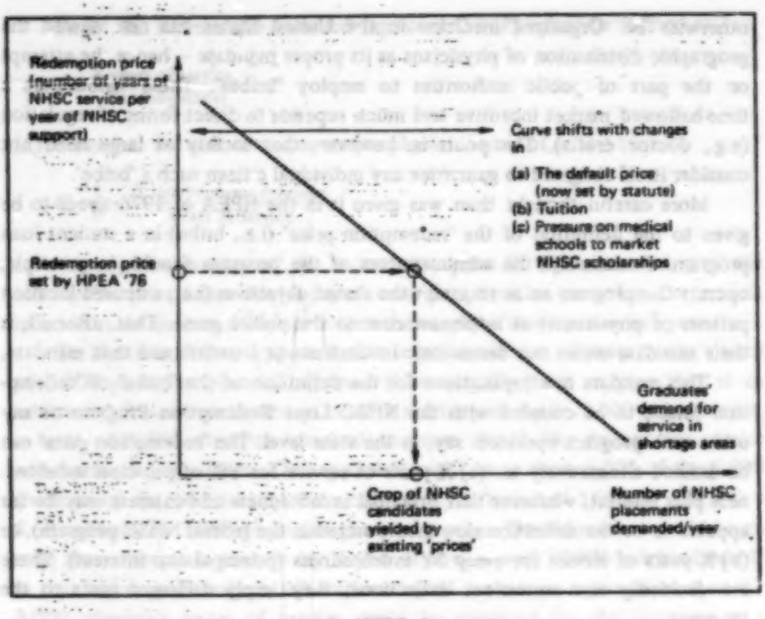
Each applicant for an NHSC scholarship agrees to provide one year of service in a designated shortage area for each academic year so supported, or two years of service, whichever is greater.

Recipients failing to begin or complete their service obligation are to pay damages equal to three times the amount received under the scholarship program, plus interest, payable within one year of breach of the NHSC contract.

The NHSC program is to be administered by the Department of Health, Education and Welfare which will designate health manpower shortage areas and assign NHSC graduates to these areas. Comments from local health service agencies and professional societies are to be considered in making these determinations. Loans of up to $ 50,000 will be made available to shortage areas for the construction of facilities housing the NHSC practitioners. NHSC practitioners may elect to establish a comparable private practice in a shortage area in lieu of outright NHSC service.

One aspect of the NHSC program likely to create controversy is the placement of NHSC corpsmen. Given current program parameters, a force of between 1,000 and 1,500 is expected by 1980, close to 10,000 by 1985 and close to 23,000 by 1991 (US Congress, Congressional Budget Office, 1976a). The actual numbers will, of course, depend on the future demand for NHSC service, which in turn depends on three price parameters: (1) the price of professional training (tuition and incidentals); (2) the price for breach of an NHSC contract (the default penalty), and (3) the loan redemption price (now defined as the number of years of NHSC service per year of scholarship support). All three prices are now policy variables under the control of federal policy makers. So is the supply of NHSC scholarships and placements. The system is therefore overdetermined and may create administrative problems.

Figure 1 illustrates the problem faced by the administration of the NHSC program. A given set of training, default and redemption prices will yield a corresponding crop of graduates demanding NHSC service. This demand may exceed or fall short of the supply of NHSC placements – the latter being determined by the administrator's assessment of prevailing shortages. To escape this dilemma, one might begin with a determination of the NHSC force required to attain some target distribution and then set the three price parameters so as to yield approximately the required crop of NHSC candidates. The approach under the HPEA of 1976 has been to set the redemption and default prices by statute, to let tuition charges drift and to place whatever crop of NHSC corpsmen this price system yields. Thus, it is not inconceivable that at some time in the future


Redemption price (number of years of NHSC service per year of NHSC support)
Curve shifts with changes in
(a) The default price (now set by statute)
(b) Tuition
(c) Pressure on medical schools to market NHSC scholarships
Redemption price set by HPEA '76
Graduates' demand for service in shortage areas
Crop of NHSC candidates yielded by existing 'prices'
Number of NHSC placements demanded/year

- Fig. 1. Illustration of the demand for NHSC placements.

the program generates more candidates willing to serve than are needed, especially if medical school tuition were raised substantially. The question would then arise whether society is *obligated* to furnish medical students the option to repay their educational loans through service in designated areas or institutions. The answer implicit in the preceding sections is clearly: No.

Stripped to its bare essentials, a loan redemption program, such as the National Health Service Corps Scholarships, represents, of course, nothing other than the offer of a legally sanctioned 'bribe' paid certain physicians in exchange for service in areas or institutions these physicians might otherwise have shunned. In some countries – for example, West Germany – organized medicine bears *statutory* responsibility for an adequate geographic distribution of medical services. There is thus no need for a public program of 'bribes'. In other nations, e.g., in Quebec, Canada, organized medicine has assumed this responsibility *voluntarily*, perhaps as a preemptive reaction to what public policy might otherwise be. Organized medicine in the United States has not viewed the geographic distribution of physicians as its proper mandate – hence the attempt on the part of public authorities to employ 'bribes'. These 'bribes' are a time-hallowed market incentive and much superior to direct forms of regulation (e.g., doctor drafts). The point is, however, that society at large need not consider itself obligated to guarantee any individual citizen such a 'bribe'.

More careful thought than was given it in the HPEA of 1976 needs to be given to the definition of the 'redemption price' (i.e., bribe) in a student loan program. Presumably, the administrators of the program should, in principle, operate the program so as to attain the stated objectives (i.e., a desired location pattern of physicians) at *minimum cost* to the public purse. That, after all, is their mandate under our democratic institutions as I understand that mandate.

This mandate has implications for the definition of the 'bribe' or 'redemption price', to be coupled with the NHSC Loan Redemption Program or any other such program operated, say, at the state level. The 'redemption price' can be defined alternatively as: (a) X years of service for Y% of principal indebtedness plus interest, whatever that principal indebtedness and interest may be (as appears to be the definition now incorporated in the federal NHSC program), or (b) X years of service for every $Y indebtedness (principal and interest). These are decidedly not equivalent definitions; they imply different costs to the taxpayer.

Under definition (a), candidates for service redemption are presumably selected on the basis of 'financial need' and/or by lot. Now, 'financial need' might be measured by 'relative amount of indebtedness'. If this were the criterion, definition (a) would serve to *maximize* rather than to *minimize* the collective 'bribe' paid physicians to achieve society's objective. If legislators wish to use the taxpayer's money prudently, they would reject this definition, and certainly the presumed definition of 'financial need'.

Allocation of service redemption *by lot* need, of course, not *maximize* the collective 'bribe' under definition (a) but neither would it necessarily *minimize* it. One would be stuck with whatever degree of indebtedness (and hence 'bribe') adheres to the set of persons selected by a game of chance. From the taxpayer's perspective, it is not an attractive policy either.

On reflection, definition (b) of the 'redemption price' seems much to be preferred. This definition enables the administrator to fine-tune the 'redemption price' so as to achieve a balance between the projected number of 'service years' (as one may call them) needed and the number of physicians wishing to redeem their loans through service.

Under this scheme, the 'loan redemption price' (P) would be defined as:

$$P = \frac{\text{X years of service}}{\text{\$ indebtedness}}.$$

It follows that the cost to taxpayers per physician year of service is:

$$C = \frac{1}{P} = \frac{\text{\$ indebtedness forgiven}}{\text{Years of service}}$$

It is simply the inverse of the redemption price P. Thus, a lowering of the redemption price raises the taxpayer's cost per physician year of service, and an increase in the redemption price lowers the taxpayer's cost per service year.

To illustrate, let us suppose that it is estimated that, 5 years hence, a total of 3,000 physician years of service will be needed. Next, suppose that at an arbitrarily chosen redemption price of 1 service year for $ 20,000 indebtedness, a total of 6,000 first-year medical students would like to opt for service redemption 5 years hence. One approach might be to draw 3,000 of the 6,000 students by lot, and to pay them collectively a 'bribe' of 3,000 × $ 20,000 = $ 60 million for 3,000 physician years of service. The alternative would be to raise the redemption price to say, 1 year of service per $ 10,000 indebtedness. If at that higher price only 3,000 students opted for service redemption, then the 3,000 physician years of service could be procured for the taxpayer at a collective 'bribe' of only $ 30 million. If only 2,000 students opted for service redemption, the price would have to be lowered somewhat.

Although in practice it would not be possible to equilibrate the program quite so perfectly, it should nevertheless be obvious that a policy to define the redemption price as X years of service/$ indebtedness, coupled with a policy to change this price so as to seek a balance between the demand by students for service redemptions and society's need for such services, would *tend* to minimize the cost to taxpayers of achieving a target distribution of medical manpower. One can certainly envisage an administratively feasible iterative scheme that would yield an approximate balance. The fact that the policy might not work perfectly in practice is no reason to abandon the basic principle on which it rests. Few policies ever work perfectly.

Implicitly, in the preceding prescription is a contractual arrangement under which a student would be guaranteed in his/her freshmen year, the option to redeem loans eventually through service, all the while retaining the option to repay the loan (including penalties, if any). One could provide for that type of attrition by 'overselling' service redemptions to the freshman class. The policy is

not exactly symmetric in terms of contractual obligations, but society can afford to be generous on this score.

Finally, a policy to define the redemption price as X years of services/$ indebtedness makes it possible to redeem *any* loan in this way – whatever its source may have been. Indeed, the very nature and objective of the Loan Redemption Program as I have described it should make it acceptable to 'bribe' any physician – young or old, indebted or not – with $(1/P) in cash for every year she/he agrees to serve in a designated shortage area (presumably in addition to whatever other revenues the physician would receive from patients and third-party payers). This proposition is implicit in the very objective of the program. Suppose, for example, the redemption price were 1 year of service per $ 20,000 indebtedness. The taxpayer would then pay $ 20,000 in cash per service year to someone. To the taxpayer it would be of little moment whether that cash is funneled to a recent graduate or to an established physician willing to relocate. The cost to the taxpayer would be the same, as would the objectives achieved.

Concluding Remarks

As has been noted in the body of this paper, there is an emerging consensus among students of the American health-care sector that the nation faces an impending physician surplus – if not relative to *need*, then at least relative to society's apparent willingness to budget for physician services. Experts in many other industrialized nations report to detect similar trends in their own countries. At the same time, in almost all these nations – and in the United States – the number of qualified candidates seeking admission to medical school is reported to exceed the capacity of medical schools. This excess demand creates strong political pressure to expand the already inflated capacity of medical schools still further, and almost invariably at public expense.

The logical implication of the observed excess demand for medical school education is that present and projected physician incomes are higher than need be to attract the desired number of physicians into the profession. Alternatively, it can be argued that current tuition levels are much too low from a strictly economic perspective. Tuition levels are too low, because medical education is so heavily subsidized with public funds. It has been argued in this essay that these subsidies create not only economic inefficiency – i.e., an excess supply of medical manpower – but they are also objectionable on ethical grounds.

It is reasonable to suppose that the demand for medical school places responds negatively to the level of tuition levied on students, other things being equal. Part, though perhaps not all, of the imbalance between society's apparent future demand for physicians and their projected supply might therefore be reduced by permitting tuition charges to rise to a level that either clears the market for medical education, or, that equates demand for medical school places with their supply. If that level exceeds the full cost of providing medical education and one does not wish medical schools to operate at a profit, then tuition might be permitted to rise to at least the full cost level. It has been argued in this essay that such a policy would not only be efficient on purely economic grounds, but that one can justify it also on purely ethical grounds. A public subsidy to private medical practitioners in this country must have a *regressive* incidence. It redistributes income *towards* the upper income classes of society. It is reasonable to assert that inherently regressive tax or subsidy programs are viewed as ethically offensive in this country, at least ostensibly. The entire current debate over tax reform rests on this ethical tenet – and a subsidy *is* a negative tax!

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Senator **Schweiker**. I want to thank all the witnesses for their testimony today. They have given the committee much to think about with regard to the future of the National Health Service Corps and changing patterns of health services delivery in the United States.

I want to reinforce that it is not too soon to be thinking about 1990 with regard to the National Health Service Corps. The NHSC scholarship program has a 6- to 8-year lag time. Scholarships that we give out in 1980 represent service that will be provided around 1987. This underscores the need for this committee to look squarely at what we have created and be sure that a massive Corps buildup is not an extravagant overreaction.

I believe today's hearing is an important step in helping this committee assess the future of the health care delivery system in the United States. The future is a very different one than experts were telling us about a few years ago. For example, we have heard today that there is a competitive market for physician services. Physicians do compete and will increasingly compete as their numbers swell. This can only be good news for those currently underserved. Further, it suggests that this committee should emphasize competitive structures, ones that solve our health care problems by stimulating competition among health care providers rather than unfairly subsidizing some to the detriment of others.

We have also heard strongly expressed concerns that a burgeoning National Health Service Corps must inevitably encroach on the private sector to an unwarranted extent. The goal of the Corps is no longer to get individuals placed in underserved areas with encouragement to stay in private practice after their obligation is completed. Instead the predominance of integrated sites means a revolving door for Corps physicians to move in and out the community. This will not accomplish the personal "physician to patient" relationship that Dr. Rogers has held up to us as the ideal.

We have been told that the National Health Service Corps has accomplished many good things. I do not doubt this, nor do I question that with proper direction, careful management and a restrained size, the NHSC could accomplish much good during the 1980's at a reasonable cost and without establishing a separate Federal health delivery system.

When Congress first established the NHSC, its goal was to place physicians and dentists and other health providers in underserved areas with the hope that they would remain there for all or most of their career. To my knowledge, Congress had never established a new or different goal for this program. Nonetheless, private practice does not seem to be the goal now, rather it is the development of a Federal health care delivery system fed by short-term commitments from scholarship-obligated Corps physicians. The Corps should not be diverted to this purpose without explicit congressional approval. Nor should the Corps be utilized to relieve States and the Federal Government from assuring reimbursement levels for providers who treat the indigent and the elderly. Otherwise, this will result in something that this Congress has said for nearly 15 years that it will not tolerate: A two-class system of care—and make no mistake about it—if the poor and the elderly have as their choice a Government doctor in a Government clinic and everyone else has a choice of a private doctor—this is a two-class system of care. We need to make sure that as many Americans as possible have access to a personal private physician with whom they can have a long continuing relationship as members of the same community. A massive Federal health service corps does not seem to me to be the way to achieve this end.

Again, I want to thank the witnesses for appearing today and ask to have the record kept open for the insertion of a number of articles relevant to the topic of today's hearing. The hearing will now adjourn.

[Whereupon, at 12:37 p.m., the subcommittee adjourned, subject to the call of the Chair.]

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